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ABSTRACT

This volume, the first in a series of publications that will provide entry-level competencies in the area of building maintenance, is designed as an introduction. The seven instructional units cover these areas in the shop program: (1) introduction to building maintenance, (2) leadership development, (3) personal development, (4) job application and interview, (5) general safety, (6) shop math, and (7) measurement. Each unit contains the basic components of a unit of instruction: performance objectives (both unit and specific), suggested teaching activities to help the students complete the specific objectives and evaluation procedures, information sheets that provide content essential for meeting the cognitive requirements of the unit, transparency masters, job sheets, assignment sheets that give direction to study and that furnish activities providing application of the knowledge contained in the information sheet, a unit test, and answers to the unit test. (YLB)

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ED230789

Units of Instruction

BUILDING MAINTENANCE

INTRODUCTION

Teacher's Guide

Prepared by
Bill Barnes, Ph.D.

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
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BUILDING MAINTENANCE: INTRODUCTION

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PREFACE

ACKNOWLEDGMENTS

USE OF INSTRUCTIONAL UNITS

UNIT NUMBER	UNIT TITLE
I	INTRODUCTION TO BUILDING MAINTENANCE
II	LEADERSHIP DEVELOPMENT
III	PERSONAL DEVELOPMENT
IV	JOB APPLICATION AND INTERVIEW
V	GENERAL SAFETY
VI	SHOP MATH
VII	MEASUREMENT

PREFACE

BUILDING MAINTENANCE: INTRODUCTION is the first in a series of publications designed for CVAE Building Maintenance instructors in Texas. This multi-year effort is an attempt to provide, in one series of publications, the entry-level competencies that need to be developed to enable graduates of building maintenance programs to enter employment in a variety of jobs.

This volume is designed to introduce the student to Building Maintenance. The organization and content are due primarily to the excellent input of the members of the teacher advisory committee who reviewed the materials in the draft stage. This material gives basic information designed to assist teachers in improving instruction, and thus improving student performance. It is the responsibility of each instructor to personalize and localize each lesson in meeting the needs of their students.

The instructional materials in this publication are written in terms of student performance based upon measurable objectives. Criterion-referenced tests have been included to provide a means of measurement of student progress.

It is the belief of the OCL staff that the format we use for presentation of material is one of the best. We sincerely encourage feedback from users of our material in order to enable the OCL staff to better meet the needs of vocational teachers and students.

Bill Barnes, Director
Occupational Curriculum Laboratory
East Texas State University

ACKNOWLEDGMENTS

Appreciation is extended to the many individuals who contributed their time and experience to the development of these materials for BUILDING MAINTENANCE: INTRODUCTION.

The contents of this publication were designed by the statewide Building Maintenance Advisory Committee. Members of this committee generously provided input and reviewed materials as they were developed by OCL staff. Special thanks must go to the following instructors. This may not be a complete list of participants, as staff for this publication has changed during the development phase of this effort. Our apologies are extended to any instructor which was omitted from the list.

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Alfred Jost, Stinson Vocational Center, San Antonio
John Grusendorf, Marlin Middle School, Marlin
Bob Hyatt, San Marcos High School, San Marcos

Credit must be extended to the staff of the Division of Occupational Education and Technology for their direction and leadership in initiating and supporting this effort.

Special credit is extended to Durwin Hohhertz for the development of this effort through the first draft stage. The organization and contents of this publication are due to his efforts while he was director of the OCL.

Gratitude is expressed to all members of the OCL staff who, as usual, did an exemplary job in typing, editing, preparation of graphics, and printing of this document.

USE OF THE INSTRUCTIONAL UNITS

The Building Maintenance instructional units cover certain instructional areas in the shop program. Each included the basic components of a unit of instruction: performance objectives, suggested activities, information sheets, assignment sheets, job sheets, transparency masters, unit tests, and answers to unit tests. Units are planned for more than one classroom period of instruction.

Careful study of each instructional unit will enable the teacher to determine:

A. The amount of material that can be covered in each class period.

B. The skills that must be demonstrated.

C. The supplies and equipment needed for skill performance.

D. The amount of classroom time needed for teacher demonstration and student practice.

E. Supplementary materials that must be ordered.

F. Any resource personnel who must be contacted.

The specific components of an instruction unit perform the following functions:

OBJECTIVES

Each unit of instruction is based on performance objectives. These objectives specify the exact behaviors the students will be exhibiting, thus providing students with a sense of direction.

Performance objectives are stated in two forms. The unit objectives state the materials to be covered in the unit of instruction and how the student will handle the material. Specific objectives state the types of performance the student will be doing to satisfy the unit objective.

A classroom discussion should follow immediately after the students read the objectives so that any quetsions concerning the performances expected of the student can be answered.

SUGGESTED ACTIVITIES

Each unit of instruction has a Suggested Activities Sheet outlining steps to follow in accomplishing specific objectives.

Instructor--Duties of the instructor will vary from unit to unit, but the following are minimum activities for the instructor:

1. Provide students with objectives, information, assignment and/or job sheets.

2. Discuss objectives and information sheets
3. Make transparencies
4. Demonstrate procedures outlined on job sheets (when included)
5. Give test
6. Review the students' tests to identify weak areas

Any additional instructional activities and teaching methods to aid students in accomplishing the objectives are strongly encouraged.

Student--Student activities are listed to help the student achieve the objectives of the unit.

INFORMATION SHEET

Information sheets provide content essential for meeting the cognitive requirements of the unit. These sheets provide an excellent guide for presenting knowledge necessary to develop the skills specified in the unit objective.

Student should read the information sheets before the information is discussed in class. Students are encouraged to make any additional notes on the information sheets to help them in their learning process.

TRANSPARENCY MASTER

Transparency masters provide information in a special way. Transparencies may present new information, or they may reinforce information presented in the information sheets. They are particularly effective when identification is necessary.

Make the transparencies from the masters and place them in your notebook ready for immediate use.

Copies of transparency masters can be made and used as student handouts to supplement the material contained in the information sheet.

JOB SHEETS

Job sheets are an integral part of each unit of instruction. The instructor should be able to demonstrate the skills outlined in the job sheets. Procedures specified in the job sheets give direction to the skill being taught and allow both student and teacher to check student progress in performing the skill. Job sheets provide a ready outline to students and furnish to potential employers a picture of the types of skills being taught. Job sheets may be used as an individual or teamwork project.

ASSIGNMENT SHEETS

Assignment sheets give direction to study and furnish activities which provide application of the knowledges contained in the information sheet. These may be given to the student for completion in class or used for homework assignments. Asnwer sheets are provided for checking student progress.

UNIT TEST

Unit test questions have been constructed to measure student achievement of each specific objective listed on the objectives sheet. Individual test items may be pulled out and used as an objective. This kind of testing may be used as a daily quiz and will help the teacher spot difficulties being encountered by students in their efforts to accomplish the terminal objective.

ANSWERS TO UNIT TEST

Test answers are provided for each unit. These may be used by the teacher and/or student for checking student achievement of the objectives.

PERSONALIZING AND LOCALIZING INSTRUCTIONAL UNITS

Carefully review each instructional unit before using in the classroom. In reviewing the units, you may find it necessary to localize and personalize the units based upon your expereince and the needs of your students.

Some of the ways of supplementing units are the use of audiovisuals, field trips, resource personnel, games and simulations, case studies, peer teaching, role palying, and personal experiences of both the teacher and students.

Various methods may be used in localizing a unit of instruction. You may wish to apply units of instruction to the local community, add additional materials from newspapers and magazines, invite local resource people, and arrange field trips.

In personalizing a unit of instruction, you may want to make the course content relevant to home and/or work situations. You may wish to involve students in the planning of the unit by using their own personal experiences. Having students involved in the teaching of some of the materials is sometimes an effective example of peer teaching.

Remember that as an instructor, you may wish to add objectives to the units of instruction based on the individual needs of the student or employers in your area. You should add assignment and job sheets as necessary and construct a corresponding unit test item for ecah added objective.

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

UNIT OBJECTIVE

After completing this unit, the student will be able to identify the terms, areas of instruction, policies and regulations; occupational information, and the Social Security program as it relates to the Building Maintenance program. This knowledge will be evidenced through demonstration and by successfully completing the unit objective.

SPECIFIC OBJECTIVES

After completion of this unit, the student will be able to:

1. Match introductory terms to the correct definition.
2. Point out the areas of instruction covered in the Building Maintenance program.
3. List five careers for which one has the opportunity to receive training through the Building Maintenance program.
4. Explain the nature of work involved in a Building Maintenance occupation.
5. Identify the advantages of employment in a building maintenance occupation.
6. Explain the policies of the local school.
7. Select the correct clothing to be worn in the shop.
8. Point out the correct general shop policies.
9. Explain the policies relating to shop organization.
10. Point out the history and purpose of the Social Security program.
11. Explain how a Social Security card may be obtained.
12. Explain the use of the Social Security card.

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

SUGGESTED TEACHING ACTIVITIES

To utilize this curriculum in the most effective way, the instructor should review each unit of instruction and localize and individualize the material for their program. Lessons may need to be combined or divided to meet the time constraints of the instructor and the ability of the students.

I. Objective Sheet

   A. Review all objectives, and then add or delete to meet (your own) program objectives.

   B. Review and discuss with the students each specific objective as it relates to the training program.

II. Information and Assignment Sheets

   A. INFORMATION SHEET 1--ORIENTATION

      1. Explain the terms and definitions to the students.

      2. Discuss the areas of instruction taught in your program.

      3. Conduct a tour of the shop in order to introduce each area of instruction and to help stimulate interest in the program.

      4. Review Careers in the Building Maintenance area. Relate these careers to the community, people the class might know, local companies, or parents and/or friends of the students.

      5. Discuss the nature of work for Building Maintenance personnel. Start emphasizing correct safety practice at this time.

      6. Review and discuss the advantages and disadvantages of employment in building maintenance. A list of each on the chalkboard is a means of starting discussion.

   B. INFORMATION SHEET 2--POLICIES AND REGULATIONS

      1. Discuss with the students the policies and regulations in your school's handbook.

      2. Discuss your own policies and rules with the students. Prepare and distribute to each student if possible.

      3. Discuss the general shop policies for the program.

      4. Explain the clothing required in the building maintenance shop.

5. Have each student complete ASSIGNMENT SHEET 1--PERSONAL DATA SHEET.

   (NOTE: A seating chart could be developed at this time and pictures of students could be attached.)

6. Discuss ASSIGNMENT SHEET 2--SAFETY PLEDGE FORM and have the students take this form, to be signed and returned for the instructor's file.

7. Discuss ASSIGNMENT SHEET 3--TRAVEL CONSENT. This required form should be compared to the travel form required by the school, and modified to comply with school regulations. A separate form may be required for each trip taken.

C. INFORMATION SHEET 3--SOCIAL SECURITY

1. Explain the history of the Social Security system and how it applies to each student.

2. Assist the students in obtaining a Social Security number or duplicate card by using the following assignment sheets.

   a. ASSIGNMENT SHEET 4--APPLICATION FOR A SOCIAL SECURITY NUMBER

      (NOTE: Students who do not have a Social Security number should fill out this sheet.)

   b. ASSIGNMENT SHEET 5--APPLICATION FOR A DUPLICATE CARD

      (NOTE: Have those students who have lost their cards to use this assignment.)

III. Transparency Masters

(NOTE: Transparency masters are included in the student manual and can be used as information sheets.)

A. TM-1--CERTIFICATE OF COMPLETION

B. TM-2--APPLICATION FOR A SOCIAL SECURITY CARD

IV. Evaluation

A. The unit test is divided into three parts.

   (NOTE: Each part covers one information sheet.)

B. Various approaches may be used in testing.

   (NOTE: Research indicates frequent testing on small units is more effective in developing retention for students.)

1. Give each part of the test after completion of each information sheet.

2. Use the test as an assignment for the student.

3. Some students may respond better to an oral test with the instructor.

4. The instructor should add evaluation questions for any material added to the unit.

V. Answers to the test

A. Answers are based upon information covered in the unit.

B. For convenience in grading, add answer sheets to correspond to questions added to the test.

IV. References

A. A Suggested Basic Course Outline for General Metal Trades. Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas

B. Local School Handbook

C. Job Related Information, Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

INFORMATION SHEET 1--ORIENTATION

I. Terms and definitions

- A. Assignment Sheet--the activities which reinforce the information provided by the Information Sheets
- B. Attitude--the manner of acting, feeling, or thinking that shows a person's personality
- C. Career--kind or type of work that a person chooses as a way to earn money
- D. Credit--the certification of a student's completion of a unit of instruction or a course of study to the instructor's satisfaction.

  (NOTE: The student receives a Certificate of Completion at the completion of the course.)
- E. Discipline--a system of rules governing conduct and activities
- F. Fabrication--the forming, shaping, and assembly of material to make a product
- G. FICA--The Federal Insurance Contributions Act
- H. Information sheet--provides the necessary information to complete the unit
- I. Job Sheet--provides a list of items and procedures necessary to perform a skill
- J. Objective Sheet--states the types of performance the student will do to satisfactorily complete the unit
- K. Orientation--becoming familiar with classmates, shop policies and information, type of work involved, and responsibilities
- L. Test--a method of checking the students' understanding of the information in the unit

II. Areas of instruction

- A. Orientation
- B. Carpentry
- C. Masonry
- D. Plumbing
- E. Electrical wiring
- F. Painting
- G. Glazing
- H. Flooring
- I. Pest Controlling

III. Careers in Building Maintenance

- A. Carpenter
- B. Plumber
- C. Electrician
- D. Mason mason
- E. Painter
- F. Floorlayer
- G. Glazier

IV. Nature of work

- A. Inside and outside
- B. Year round
- C. Limited union workers
- D. Health hazards
  - 1. Electrical shock
  - 2. Sharp metal
  - 3. Harmful fumes
  - f. Danger of falling

V. Advantages of employment in building maintenance

- A. Provides opportunities to learn and apply a variety of skills
- B. Involves an area with a growing need for workers
- C. Provides opportunities to move up in a company
- D. Allows an individual to own a business without a large in-investment

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

INFORMATION SHEET 2--POLICIES AND REGULATIONS

I. Types of policies

(NOTE: The student should become acquainted with the following policies through the instructor or principal.)

- A. Grading system
- B. Report card time periods
- C. Excused and unexcused absences
- D. Schedule changes
- E. Extended illnesses and doctors' statements
- F. "Make up" policy for school work missed
- G. Class attendance, hall passes, and tardy policies
- H. Suspension and expulsion policies
- I. Exemption program guidelines

II. Shop clothing

- A. No jewelry should be worn.
- B. Loose fitting clothing should not be worn around machines.
- C. Frayed or oily clothes should not be worn when welding.
- D. Students should wear coveralls or other protective clothing.
- E. Boots or other protective shoes should be worn working with heavy objects (never tennis shoes).
- F. Coveralls and other shop clothes should be washed each week.

III. General shop policies

- A. Students are permitted to smoke in assigned areas only.
- B. Students should park in the areas reserved for students.
- C. Each student should complete a Personal Data Sheet and a Parental Permission Slip to be kept on file in Building Maintenance.
- D. Students should keep up with their assignments and responsibilities.

INFORMATION

E. Students must clean up any equipment they use.

F. Students should keep record of, and pay for, any shop supplies used.

G. All work areas should be kept clean and organized.

H. Any faulty equipment should be unplugged and the instructor notified.

I. Any faulty wiring should be reported to the instructor.

J. Unused equipment should be left unplugged.

K. Running in the shop is not permitted.

L. Destroying or defacing school property can result in the student being expelled or suspended from school.

M. Chewing gum should be placed in trash containers.

N. Students should take part in shop activities, and will be graded accordingly.

O. Students should act properly on buses and field trips, or they will not be allowed to participate.

IV. Shop organization

A. Progress Chart--A record that will document the completion of assignments and jobs

B. Certificate of Completion--A certificate showing that the student has completed the requirements of the course. (See TM 1)

(NOTE: On the back, the certificate will list a record of skills the student has developed during the program.)

C. Student assignments

1. Individual--The student should complete the job or assignment without help from other students.

2. Group--The student should work together with other students in completing the job or assignment.

CERTIFICATE OF COMPLETION

This is to certify that ______________________________

Has successfully completed the program

____

Presented this ____________ Day of ____________ 19______

at ______________________________

____
Principal

VOCATIONAL OPPORTUNITIES CLUBS
TEXAS

____
Director

____
Teacher

____
Superintendent

UNIT I

INTRODUCTION TO GENERAL METALS

ASSIGNMENT SHEET 1--PERSONAL DATA SHEET

Directions: Print the following information for your instructor.

A. Name

____

B. Home Address

____

C. Home Telephone Number

____

C. Name of Parent or Guardian

____

E. Social Security Number

____

F. Birth Date

____

G. Hobbies

1. ______________________
2. ______________________
3. ______________________

H. Job Experience (list all past jobs)

1. ______________________
2. ______________________
3. ______________________

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

ASSIGNMENT SHEET 2--SAFETY PLEDGE FORM

DIRECTIONS: Before the student will be allowed to use any type of hand tools or power equipment in the Building Maintenance shop, this safety pledge form must be signed by the student and parents or legal guardians. The student will return signed form to the teacher, who will keep it on file in the department.

__________________________, who is enrolled in _______________________,

will as part of the course of instruction operate machines or equipment as safely as possible providing that parents or legal guardians give written permission.

It is understood that each student will be given proper instruction, both on the use of equipment and correct safety procedures, before being allowed to operate such equipment. The student will assume responsibility for the following safe practices and is therefore asked to subscribe to the following safety pledge:

1. I promise to follow all safety rules.
2. I promise never to use a machine without first having the instructor's permission.
3. I will pass a safety test with 100% accuracy before asking permission to operate equipment.
4. I will report all accidents and injuries to the instructor immediately.
5. I promise not to horseplay while in the shop.

Date:_________________________ Student's Signature ____________________

Parents' Consent

I hereby give my written consent to allow my child to operate all machines and equipment necessary to meet the requirements of the course.

Date: _______________________Parent's Signature _______________________

(NOTE: Parents are cordially invited to visit the shop to inspect the machines and equipment, and discuss the safety aspects of them.)

Sample

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

ASSIGNMENT SHEET 3--TRAVEL CONSENT

Each time students are required to travel, they should have written consent from a parent. A travel permit should be sent home well in advance of the trip. Travel permits can be written to give parent permission all year, but it is usually better to fill out one for each trip. The following form is a typical Travel Consent Form.

Date ______________________

____
(sponsor)

We have discussed the trip to ______________________ for ______________________ with ______________________ and
(organization) (student)

have given our permission for him/her to attend this meeting and participate in the activities involved.

______________________ has assured us that he/she will conduct himself/herself in such a way that credit will be reflected upon ______________________ and the organization he/she repre-
(school)

sents. He/she will dress neatly and appropriately for the occasion.

It is understood, of course, that these students will be chaperoned both en route and while at the function, and that normal precautions will be taken in the interest of their safety and well-being. We agree that the sponsors and chaperones will not be held responsible for any accident or misfortune which might occur in connection with this function, and grant permission for medical aid.

You may be assured that ______________________ is being permitted to make this trip with our full consent.

Very sincerely yours,

____

____
Signature of parent (s)

Date ______________________

Sample

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

INFORMATION SHEET 3--SOCIAL SECURITY

I. History and purpose

(NOTE: If you do not have a Social Security number, your instructor will help you apply for one because it will be required when you start to work.)

- A. Government-sponsored program

  (NOTE: Employers are required by law to participate in the program.)

- B. Supervised by the Bureau of Old Age and Survivor's Insurance
- C. Employees of any company are entitled to benefits from the program upon retirement or disability
- D. Employer and employee both contribute to the program on a percentage basis.
- E. Provisions are made for disability payments to persons unable to work
- F. Individual numbers are issued to insure proper credit.

II. Securing a Social Security Card

- A. Obtain a Social Security Application Form from the:
  1. Office of Social Security Administration
  2. Any post office
- B. Have your instructor check your application for the correct information.
- C. Return the application to the office of Social Security Administration.

III. Social Security Card

- A. The card will be sent when the Social Security Office receives the application.
- B. The card will have your identification number, which is used to record an employee's earnings, tax payments, and benefits.
- C. The number should be memorized for later use.
- D. The card should be signed immediately.

E. The number can also be used for identification.

(NOTE: Used on income tax returns, bank records, military service records, and other important records.)

F. Some schools and businesses use it as an identification number.

G. If the card is lost, request a duplicate on an application form.

(NOTE: Do not request a new number.)

APPLICATION FOR A SOCIAL SECURITY CARD

DEPARTMENT OF HEALTH AND HUMAN SERVICES
SOCIAL SECURITY ADMINISTRATION

FORM APPROVED
OMB NO 72 S79002

FORM SS-5 – APPLICATION FOR A SOCIAL SECURITY NUMBER CARD
(Original, Replacement or Correction)

MICROFILM REF NO (SSA USE ONLY)

Unless the requested information is provided, we may not be able to issue a Social Security Number (20 CFR 422 103(b))

INSTRUCTIONS TO APPLICANT ▶ Before completing this form please read the instructions on the opposite page You can type or print using pen with dark blue or black ink Do not use pencil

NAA NAB **1**
NAME TO BE SHOWN ON CARD — First | Middle | Last
FULL NAME AT BIRTH (IF OTHER THAN ABOVE) — First | Middle | Last
ONA OTHER NAME(S) USED

STT **2** MAILING ADDRESS (Street/Apt No P O Box Rural Route No)
CTY STE ZIP CITY | STATE | ZIP CODE

CSP **3** CITIZENSHIP (Check one only)
☐ a U.S. citizen
☐ b Legal alien allowed to work
☐ c Legal alien not allowed to work
☐ d Other (See instructions on Page 2)

SEX **4** SEX ☐ Male ☐ Female

ETB **5** RACE/ETHNIC DESCRIPTION (Check one only) (Voluntary)
☐ a Asian, Asian American or Pacific Islander (Includes persons of Chinese, Filipino, Japanese, Korean, Samoan, etc., ancestry or descent)
☐ b Hispanic (Includes persons of Chicano, Cuban, Mexican or Mexican-American, Puerto Rican, South or Central American, or other Spanish ancestry or descent)
☐ c Negro or Black (not Hispanic)
☐ d North American Indian or Alaskan Native
☐ e White (not Hispanic)

DOB **6** DATE OF BIRTH ▶ MONTH | DAY | YEAR
AGE **7**
PRESENT AGE
PLB **8** PLACE OF BIRTH ▶ CITY | STATE OR FOREIGN COUNTRY

MNA **9** MOTHER'S NAME AT HER BIRTH — First | Middle | Last (her maiden name)
FNA FATHER'S NAME — First | Middle | Last

PNO **10** a. Have you or someone on your behalf applied for a social security number before? ☐ No ☐ Don't Know ☐ Yes
If you checked "yes" complete items "b" through "e" below otherwise go to item 11
SSN PNS PNY b. Enter social security number | c. In what State did you apply? | What year?
NLC d. Enter the name shown on your most recent social security card | e. If the birth date you used was different from the date shown in item 6, enter it here ▶ MONTH | DAY | YEAR

DON **11** TODAY'S DATE ▶ MONTH | DAY | YEAR
12 Telephone number where we can reach you during the day ▶ HOME | OTHER

ASD **WARNING: Deliberately providing false information on this application is punishable by a fine of $1,000 or one year in jail, or both.**

13 YOUR SIGNATURE
14 YOUR RELATIONSHIP TO PERSON IN ITEM 1 ☐ Self ☐ Other (Specify) ____________
WITNESS (Needed only if signed by mark "X")
WITNESS (Needed only if signed by mark "X")

DO NOT WRITE BELOW THIS LINE (FOR SSA USE ONLY)
☐ SUPPORTING DOCUMENT-EXPEDITE CASE
☐ DUP ISSUED
SSN ASSIGNED OR VERIFIED
SSN
DTC SSA RECEIPT DATE ____________
NPN
DOC | NTC | CAN | BIC
SIGNATURE AND TITLE OF EMPLOYEE(S) REVIEWING EVIDENCE AND/OR CONDUCTING INTERVIEW
TYPE(S) OF EVIDENCE SUBMITTED
☐ MANDATORY IN PERSON INTERVIEW CONDUCTED
DATE
DATE
IDN | ITV | DCL

FORM SS-5 (2-81) PRIOR EDITIONS SHOULD BE DESTROYED

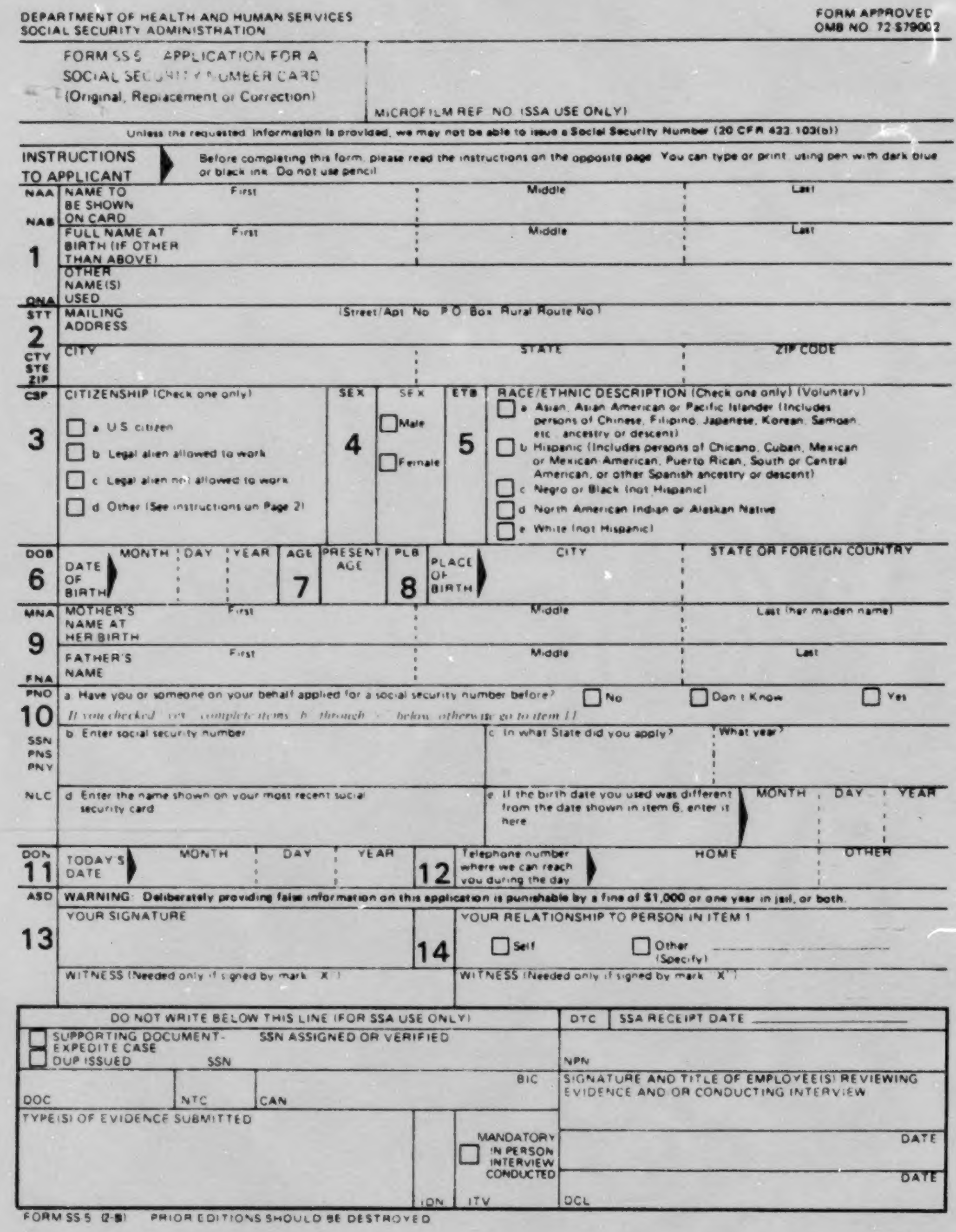
✓

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

ASSIGNMENT SHEET 4--APPLICATION FOR SOCIAL SECURITY NUMBER

Directions: Using a dark blue or black ink pen, complete the application form by providing the correct information.



DEPARTMENT OF HEALTH AND HUMAN SERVICES
SOCIAL SECURITY ADMINISTRATION

FORM APPROVED
OMB NO 72-S79002

FORM SS-5 APPLICATION FOR A SOCIAL SECURITY NUMBER CARD
(Original, Replacement or Correction)

MICROFILM REF NO (SSA USE ONLY)

Unless the requested information is provided, we may not be able to issue a Social Security Number (20 CFR 422 103(b))

INSTRUCTIONS TO APPLICANT: Before completing this form, please read the instructions on the opposite page. You can type or print, using pen with dark blue or black ink. Do not use pencil.

NAA 1 NAME TO BE SHOWN ON CARD — First / Middle / Last

NAB FULL NAME AT BIRTH (IF OTHER THAN ABOVE) — First / Middle / Last

ONA OTHER NAME(S) USED

STT 2 MAILING ADDRESS (Street/Apt No, P O Box, Rural Route No)

CTY STE ZIP — CITY / STATE / ZIP CODE

CSP 3 CITIZENSHIP (Check one only)

- ☐ a U S citizen
- ☐ b Legal alien allowed to work
- ☐ c Legal alien not allowed to work
- ☐ d Other (See instructions on Page 2)

SEX 4 SEX ☐ Male ☐ Female

ETB 5 RACE/ETHNIC DESCRIPTION (Check one only) (Voluntary)

- ☐ a Asian, Asian American or Pacific Islander (Includes persons of Chinese, Filipino, Japanese, Korean, Samoan, etc, ancestry or descent)
- ☐ b Hispanic (Includes persons of Chicano, Cuban, Mexican or Mexican American, Puerto Rican, South or Central American, or other Spanish ancestry or descent)
- ☐ c Negro or Black (not Hispanic)
- ☐ d North American Indian or Alaskan Native
- ☐ e White (not Hispanic)

DOB 6 DATE OF BIRTH — MONTH / DAY / YEAR

AGE 7 PRESENT AGE

PLB 8 PLACE OF BIRTH — CITY / STATE OR FOREIGN COUNTRY

MNA 9 MOTHER'S NAME AT HER BIRTH — First / Middle / Last (her maiden name)

FNA FATHER'S NAME — First / Middle / Last

PNO 10 a Have you or someone on your behalf applied for a social security number before? ☐ No ☐ Don't Know ☐ Yes

If you checked yes complete items b through e below, otherwise go to item 11

SSN PNS PNY b Enter social security number — c In what State did you apply? — What year?

NLC d Enter the name shown on your most recent social security card — e If the birth date you used was different from the date shown in item 6, enter it here — MONTH / DAY / YEAR

DON 11 TODAY'S DATE — MONTH / DAY / YEAR

12 Telephone number where we can reach you during the day — HOME / OTHER

ASD WARNING: Deliberately providing false information on this application is punishable by a fine of $1,000 or one year in jail, or both.

13 YOUR SIGNATURE

14 YOUR RELATIONSHIP TO PERSON IN ITEM 1 ☐ Self ☐ Other (Specify) ____________

WITNESS (Needed only if signed by mark "X")

WITNESS (Needed only if signed by mark "X")

DO NOT WRITE BELOW THIS LINE (FOR SSA USE ONLY)

DTC SSA RECEIPT DATE ____________

☐ SUPPORTING DOCUMENT-EXPEDITE CASE
☐ DUP ISSUED
SSN ASSIGNED OR VERIFIED
SSN

NPN

DOC NTC CAN BIC

SIGNATURE AND TITLE OF EMPLOYEE(S) REVIEWING EVIDENCE AND OR CONDUCTING INTERVIEW

TYPE(S) OF EVIDENCE SUBMITTED

☐ MANDATORY IN PERSON INTERVIEW CONDUCTED

DATE

DATE

IDN ITV DCL

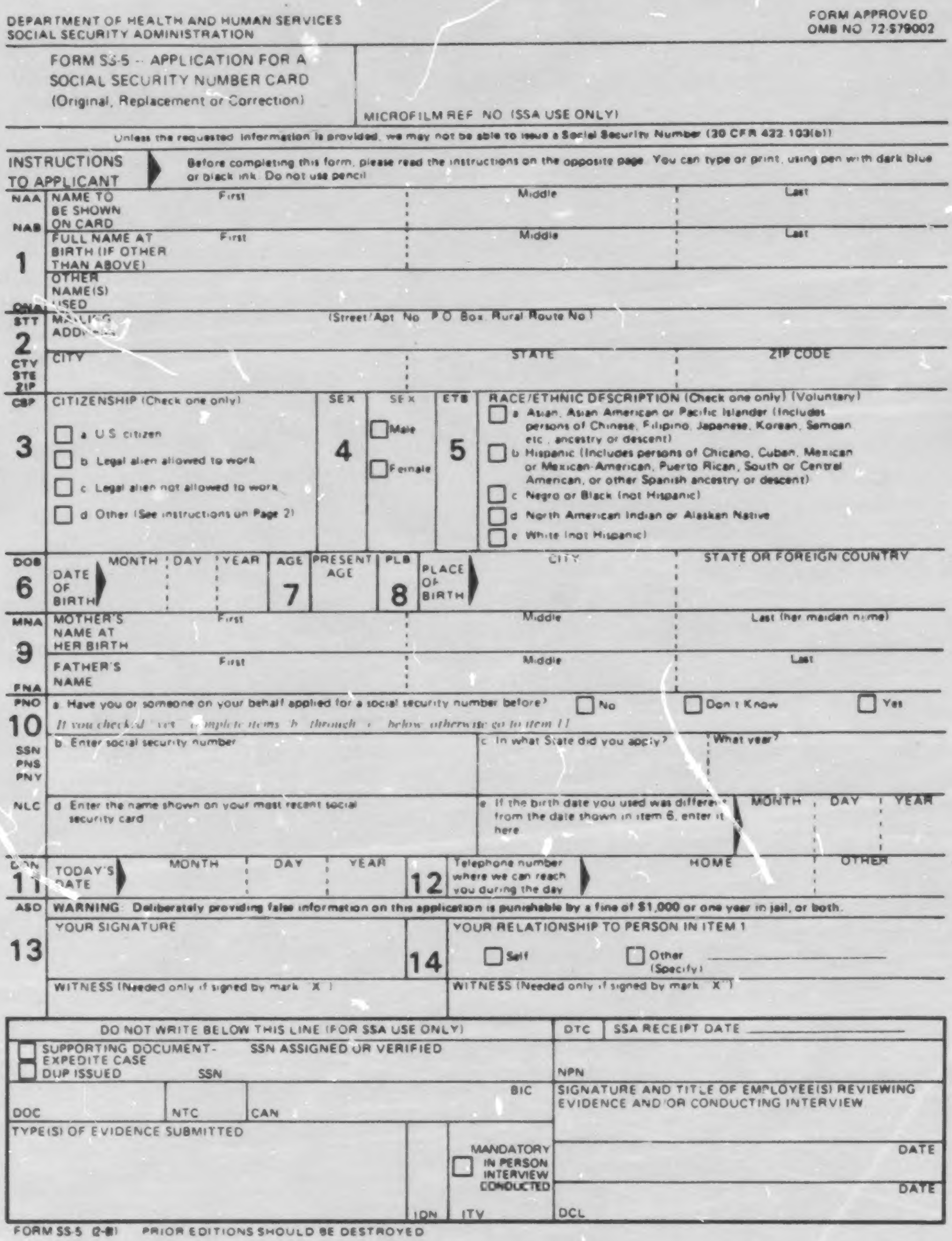
FORM SS-5 (2-81) PRIOR EDITIONS SHOULD BE DESTROYED

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

ASSIGNMENT SHEET 5--APPLICATION FOR A DUPLICATE CARD

Directions: Using a dark blue or black ink pen, complete the following form in requesting a duplicate card.



DEPARTMENT OF HEALTH AND HUMAN SERVICES
SOCIAL SECURITY ADMINISTRATION

FORM APPROVED
OMB NO 72-S79002

FORM SS-5 -- APPLICATION FOR A SOCIAL SECURITY NUMBER CARD
(Original, Replacement or Correction)

MICROFILM REF NO (SSA USE ONLY)

Unless the requested information is provided, we may not be able to issue a Social Security Number (20 CFR 422 103(b))

INSTRUCTIONS TO APPLICANT: Before completing this form, please read the instructions on the opposite page. You can type or print, using pen with dark blue or black ink. Do not use pencil

1 NAA NAME TO BE SHOWN ON CARD: First / Middle / Last
NAB FULL NAME AT BIRTH (IF OTHER THAN ABOVE): First / Middle / Last
ONA OTHER NAME(S) USED

2 STT MAILING ADDRESS (Street/Apt No, P O Box, Rural Route No)
CTY STE ZIP CITY / STATE / ZIP CODE

3 CSP CITIZENSHIP (Check one only)
☐ a U S citizen
☐ b Legal alien allowed to work
☐ c Legal alien not allowed to work
☐ d Other (See instructions on Page 2)

4 SEX: SEX ☐ Male ☐ Female

5 ETB RACE/ETHNIC DESCRIPTION (Check one only) (Voluntary)
☐ a Asian, Asian American or Pacific Islander (Includes persons of Chinese, Filipino, Japanese, Korean, Samoan etc , ancestry or descent)
☐ b Hispanic (Includes persons of Chicano, Cuban, Mexican or Mexican-American, Puerto Rican, South or Central American, or other Spanish ancestry or descent)
☐ c Negro or Black (not Hispanic)
☐ d North American Indian or Alaskan Native
☐ e White (not Hispanic)

6 DOB DATE OF BIRTH: MONTH / DAY / YEAR
7 AGE PRESENT AGE
8 PLB PLACE OF BIRTH: CITY / STATE OR FOREIGN COUNTRY

9 MNA MOTHER'S NAME AT HER BIRTH: First / Middle / Last (her maiden name)
FNA FATHER'S NAME: First / Middle / Last

10 PNO a. Have you or someone on your behalf applied for a social security number before? ☐ No ☐ Don't Know ☐ Yes
If you checked "yes" complete items "b" through "e" below, otherwise go to item 11
SSN PNS PNY b. Enter social security number / c. In what State did you apply? / What year?
NLC d. Enter the name shown on your most recent social security card / e. If the birth date you used was different from the date shown in item 6, enter it here: MONTH / DAY / YEAR

11 DON TODAY'S DATE: MONTH / DAY / YEAR
12 Telephone number where we can reach you during the day: HOME / OTHER

ASD WARNING: Deliberately providing false information on this application is punishable by a fine of $1,000 or one year in jail, or both.

13 YOUR SIGNATURE
14 YOUR RELATIONSHIP TO PERSON IN ITEM 1: ☐ Self ☐ Other (Specify) ____________
WITNESS (Needed only if signed by mark "X")
WITNESS (Needed only if signed by mark "X")

DO NOT WRITE BELOW THIS LINE (FOR SSA USE ONLY)
DTC SSA RECEIPT DATE ____________
☐ SUPPORTING DOCUMENT-EXPEDITE CASE
☐ DUP ISSUED
SSN ASSIGNED OR VERIFIED
SSN
NPN
DOC NTC CAN BIC
SIGNATURE AND TITLE OF EMPLOYEE(S) REVIEWING EVIDENCE AND/OR CONDUCTING INTERVIEW
TYPE(S) OF EVIDENCE SUBMITTED
☐ MANDATORY IN PERSON INTERVIEW CONDUCTED
DATE
DATE
IDN ITY DCL

FORM SS-5 (2-81) PRIOR EDITIONS SHOULD BE DESTROYED

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

TEST PART I

1. Match orientation terms to the correct definition by writing the number of the correct phrase in the blank.

_____a. The assignment sheet reinforces information provided:

   (1) by the local paper

   (2) in the information sheets

   (3) on the educational TV stations

_____b. Attitude is:

   (1) the manner of acting, feeling, or thinking that shows a person's personality.

   (2) not important as long as you get the job done.

   (3) related to the amount of sleep one gets.

_____c. A career is the type of work that:

   (1) one can make the most money

   (2) is the easiest to do

   (3) a person chooses as a way to earn money

_____d. Fabrication is the process of:

   (1) installing new parts as old parts wear out

   (2) forming, shaping, and assembly of materials to make a product

   (3) fitting any objects together

_____e. A test is a method of:

   (1) checking a student's understanding of information

   (2) deciding on a grade for a person

   (3) passing time

_____f. Discipline is the

   (1) method of avoiding work

   (2) way to take enjoyment out of a class

   (3) system of governing conduct and activities

2. Point out the areas of instruction covered in the Building Maintenance program by placing a "✓" in front of each.

_____a. Carpentry
_____b. Engine overhaul
_____c. Masonry
_____d. Electrical wiring
_____e. Glazing
_____f. Sales
_____g. Painting
_____h. Flooring
_____i. Pest controlling

3. List five careers that one has the opportunity to receive training for in the Building Maintenance program.

a.

b.

c.

d.

e.

4. Explain the nature of the work involved in building maintenance occupations. Briefly include conditions, time factors, location, and safety.

5. Identify the advantages of employment in a building maintenance occupation by placing a "✓" in front of each listed below.

_____a. Provides an opportunity to learn and apply a variety of skills.
_____b. Allows one to earn income with little effort.
_____c. Growing need for workers
_____d. Provides an opportunity to move up in a company
_____e. Allows an individual to own a business without large investments.
_____f. Provides a quick step into a job.

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

TEST PART 2

1. Explain the local school policies for each of the following:

   a. Grading

   b. Report card time periods

   c. Absences

   d. Schedule changes

   e. Illnesses

   f. "Make up" policies

   g. Attendance, hall pass, and tardy policy

   h. Suspension and expulsion

   i. Exemption program guidelines

2. Select the correct shop clothing to be worn in the building maintenance program by circling the letter in front of each listed below.

   a. Nice jewelry
   b. Loose-fitting clothing
   c. Clean, oil-free clothes
   d. Coveralls or protective clothing
   e. Boots or protective shoes when working with heavy objects
   f. Clothing which is washed each month

3. Point out the correct shop policies by circling T for TRUE or F for FALSE for each of the following statements.

T F a. Smoking is not permitted except in assigned areas

T F b. Students are allowed to park in any location

T F c. Students should have a Personal Data Sheet and Parental Permission Slip on file

T F d. Students can depend on the instructor to keep up with each student's assignments

T F e. Students are to clean up any equipment they use

T F f. Students are to keep a record of and pay for any shop supplies used

T F g. All work areas are to be kept clean and organized

T F h. Faulty equipment should be run until it quits

T F i. Faulty wiring should be reported to the instructor

T F j. Unused equipment should be left unplugged

T F k. Run if you are in a hurry

T F l. Destroying school property is permitted in certain conditions

T F m. Chewing gum should be placed in trash containers

T F n. Students should take part in activities only when they feel like it

T F o. Students should act properly on buses and field trips

4. Explain the policies relating to shop organization for each of the following topics.

a. Progress charts

b. Certificate of Completion

c. Student assignments

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

TEST PART 3

1. Point out the history and purpose of the Social Security program by circling the word that correctly completes each of the following.

   a. The (union, government) sponsors the Social Security program.

   b. It is supervised by the Bureau of (Old Age and Survivor's Insurance, Welfare.)

   c. (Employers, Employees) are entitled to benefits of the program

   d. Employer and employee both contribute to the program on a (10 to 1, percentage) basis

   e. Provisions for disability payments are made due to loss of (house, earnings)

   f. Individual numbers are issued to insure proper (credit, earnings)

2. Explain how a Social Security card may be obtained by underlining the word that correctly completes each statement below.

   a. Social Security forms may be obtained from the office of the Social Security Administration and from your local (bank, post office)

   b. You should have your (doctor, instructor) check the application for the correct information

   c. Return the application to the (Bank, Office of Social Security Administration)

3. Explain the use of the Social Security card by placing the number of the phrase that best completes each statement below.

   _____a. The card is sent to you when the Social Security Office receives the:

   (1) application

   (2) O.K. from your employer

   (3) your money

_____b. The card will have your identification number, which is used to record an employee's earnings, tax payments, and:

(1) vacation time

(2) sick leave

(3) benefits

_____c. The number should be:

(1) forgotten until needed

(2) written in the palm of your hand

(3) memorized for later use

_____d. The card should be signed:

(1) immediately

(2) in the near future

(3) by a relative

_____e. The number can also be used for:

(1) car tags

(2) raffles

(3) identification

_____f. Some schools use it as:

(1) an identification number

(2) a layoff selection system

(3) for number games

_____g. If the card is lost, you should request

(1) a new card and number

(2) a new number

(3) a duplicate card

UNIT I

INTRODUCTION TO BUILDING MAINTENANCE

ANSWERS TO TEST

Part 1

1.
   a. 2
   b. 1
   c. 3
   d. 2
   e. 1
   f. 3

2.
   a. ✓
   b.
   c. ✓
   d. ✓
   e. ✓
   f.
   g. ✓
   h.
   i. ✓

3. Any five of the following:
   a. Carpenter
   b. Plumber
   c. Electrician
   d. Cement mason
   e. Painter
   f. Floorlayer
   g. Glazier
   h. Exterminator

4. Explanation should include:
   a. Work can be either inside or outside
   b. Year round work is available
   c. There are small numbers of union workers
   d. There are potential health hazards such as:
      (1) Electrical shock
      (2) Sharp metal
      (3) Harmful fumes
      (4) Danger of falling

5.
   a. ✓
   b.
   c. ✓
   d. ✓
   e. ✓
   f.

Part 2

1. Explanation will vary according to local policies

   (NOTE: Be sure each student understands each policy.)

2. c.

   d.

   e.

3. a. T

   b. F

   c. T

   d. F

   e. T

   f. T

   g. T

   h. F

   i. T

   j. T

   k. F

   l. F

   m. T

   n. F

   o. T

4. a. Progress Charts--A record will be kept on the completion of assignments and jobs

   b. Certificate of completion--The student will receive a certificate showing that the individual has completed the requirements of the course

   c. Student assignments will be given for completion in class

Part 3

1. a. government

   b. Old Age and Survivor's Insurance

   c. Employees

   d. percentage

   e. earnings

   f. credit

2. a. post office

   b. instructor

   c. Office of Social Security Administration

3. a. 1

   b. 3

   c. 3

   d. 1

   e. 3

   f. 1

   g. 3

UNIT II

LEADERSHIP DEVELOPMENT

UNIT OBJECTIVE

After completing this unit, the student will be able to explain the meaning of leadership, identify the qualities of a good leader, and select a leadership style. The student will also be able to explain the purposes and organization of the VOCT Club as well as plan and participate in the club meetings and activities. This knowledge will be evidenced through demonstration and by satisfactorily completing the unit test.

SPECIFIC OBJECTIVES

After completing this unit, the student will be able to:

1. Explain the meaning of leadership.
2. Identify the reasons why a person should want to become a good leader.
3. Choose the correct steps to becoming a good leader.
4. Point out the ways to demonstrate leadership potential.
5. Select good leadership qualities.
6. Name three leadership styles.
7. Point out the purposes of the VOCT organization.
8. Explain the meaning of the VOCT creed.
9. Write (or state) the VOCT pledge.
10. Explain the meaning of the VOCT motto.
11. Point out the VOCT colors.
12. Select the correct code of ethics.
13. Point out the meaning of the VOCT symbols.
14. Identify the duties and symbols of the offices for VOCT.
15. Point out the things that make a good VOCT meeting.
16. Point out the correct order of business for VOCT meeting.
17. Point out the purposes of club activities.
18. Select the types of club activities.
19. List the reasons for planning a yearly calendar.
20. Select the events that should be placed on a club calendar.
21. Prepare a yearly calendar.
22. Receive travel permission from parents for VOCT events.

UNIT II

LEADERSHIP DEVELOPMENT

SUGGESTED TEACHING ACTIVITIES

I. Objective Sheet

  A. Discuss unit objectives with students

  B. Discuss each specific objective with the students

  C. Have the student complete the objectives in the most logical sequence for the shop organization.

  D. Add any necessary objectives.

II. Information and Assignment Sheets

  A. INFORMATION SHEET 1--WHAT IS LEADERSHIP?

    1. Discuss the meaning of leadership (Transparency 1)

    2. Explain how everyone can be leaders.

    3. Relate how each student should work toward the qualities of a good leader (Transparency 2)

    4. Discuss the advantages and disadvantages of the leadership styles. (Transparency 3)

    5. Have the students complete ASSIGNMENT SHEET 1--IDENTIFYING LEADERS

    6. Discuss the importance of selecting good leaders for the VOCT organization.

  B. INFORMATION SHEET 2--INTRODUCTION TO VOCT

    1. Display pictures, VOCT Newsletters, banners, and other items that might explain the VOCT organization.

    2. Have a student who has participated in VOCT during the previous year to explain the club's activities.

    3. Explain to the students what is meant by a "democratic process."

    4. Show VOCT Slide Tape presentation (see references).

  C. INFORMATION SHEET 3--CLUB MEETINGS

    1. Display the officer symbols.

    2. Provide students with VOCT Leadership Handbooks for complete lists of officer duties.

3. Have students decide which offices they would like to hold.

4. Assign a time for the first club meeting, when officers will be elected.

5. Have students complete ASSIGNMENT SHEET 2--PREPARE A CLUB CALENDAR for use at the first club meeting.

D. INFORMATION SHEET 4--GUIDELINES FOR CLUB ACTIVITIES

1. Show pictures or scrapbooks of previous club activities.

2. Provide information about school holidays and events to be included when preparing a club calendar.

3. Using the Competitive Activities Guide, explain the types of contests that are held at the area and state levels.

III. Transparency Masters

(NOTE: Transparency masters are included in the student manuals as information sheets.)

A. TM-1--LEADERSHIP

B. TM-2--QUALITIES OF A GOOD LEADER

C. TM-3--CHOOSING A LEADERSHIP STYLE

D. TM-4--VOCT EMBLEM

E. TM-5--LOCAL CHAPTER

F. TM-6--SYMBOLS FOR THE OFFICES OF VOCT

G. TM-7--SUGGESTED CALENDAR

IV. Evaluation

A. The evaluation is divided into three parts.

(NOTE: Each part covers one information sheet.)

B. Various approaches may be used in evaluation.

1. The evaluation in this unit may be given orally to check the students' understanding of VOCT rather than for a recorded grade.

2. Each part of the evaluation may be given as the student completes studying the information on one information sheet.

3. Give the entire evaluation upon completion of all the information sheets in the unit.

4. Give one or more parts of the evaluation as an additional assignment, or to reinforce areas the student did not understand.

C. Add evaluation parts corresponding to any information area or sheets added to the unit.

V. Answers to evaluation

A. Answers are based on the total information covered in the unit.

B. For convenience of grading, make corresponding answer sheets for additional evaluation parts.

VI. References

A. VOCT Leadership Handbook. Occupational Curriculum Laboratory. East Texas State University. Commerce, Texas, 75428

B. VOCT Competitive Activities Guide. Occupational Curriculum Laboratory. East Texas State University. Commerce, Texas 75428

C. Developing Skilled Manpower Citizens and Leaders for Industry. Occupational Curriculum Laboratory. East Texas State University. Commerce, Texas 75428

VII. Audiovisuals

A. VOCT Slide-Tape Presentation. Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas 75428.

UNIT II

LEADERSHIP DEVELOPMENT

INFORMATION SHEET 1--WHAT IS LEADERSHIP?

I. Leadership defined

  A. Leadership is the ability to develop confidence and loyalty in others, cause them to follow willingly, and to lead in a responsible way.

  B. A leader may not always be the individual who is in charge or has the commanding position.

II. Reasons for becoming a leader

  (NOTE: Leadership is something that can be applied to many areas of an individual's life.

  A. To gain self-confidence.

  B. To learn to meet new challenges.

  C. To gain maturity.

  D. To learn to listen to and respect the opinion of others.

  E. To reach goals faster.

III. How to become a leader

  A. Become a good follower.

  (NOTE: Follow examples of good leaders, and learn from their mistakes.)

  B. Learn your strong points and your weak points.

    (NOTE: Turn your weaknesses into strengths.)

  C. Study the qualities that make a good leader.

  D. Plan to work toward becoming a leader.

    (NOTE: Realize that leaders are made and not born into leadership.)

  E. Participate in the leadership training provided in the Vocational Opportunities Clubs of Texas.

IV. Ways to demonstrate leadership potential

  A. Be willing to assume responsibility.

  B. Take pride in doing a good job.

C. Be a good listener.

D. Be fair and impartial.

E. Realize that your responsibility is to let others share responsibilities with you.

F. Use the talents of each person in the group or organization to the fullest potential.

V. How leaders are chosen

A. Some leaders are chosen because of who they know.

EXAMPLE: An individual heads a committee because of being a friend of the boss.

B. Some get positions because of who they are.

C. Good leaders are chosen by:

1. Their ability.

2. Their experience.

3. How they deal with people.

4. Their knowledge of leadership steps and how to use them.

5. Their ability to act calmly under pressure situations.

VI. Leadership qualities

A. Demonstrates self-control.

B. Honest and fair in all dealings.

C. Loyal.

D. Assumes responsibility.

E. Is tactful.

F. Shows enthusiasm.

G. Does not give up when the going gets rough.

H. Gives clear instructions so all will understand.

I. Cooperates with others.

J. Is a good listener.

K. Always gives credit to others for their work.

L. Realizes that there are individual differences in any group.

M. Has a pleasing personality and a sense of humor.

N. Accepts and can give criticism in a positive manner.

O. Is sympathetic and understanding.

P. Tells others exactly what is expected.

Q. Makes individuals feel good about themselves and their work.

VII. Leadership styles

(NOTE: These styles are both good and bad, never use just one style but a mixture of all three styles).

A. Autocratic leader--One person has all of the power and makes all of the decisions.

1. Closely supervises the group.
2. Never lets others have a say in the planning, organizing, or control of the group.
3. More interested in getting the job done than in respecting the feelings of others.

(NOTE: It is sometimes necessary to use this style if the group is hostile or insecure in certain situations).

B. Democratic leader--All of the people involved help in decision making; individual opinions are considered.

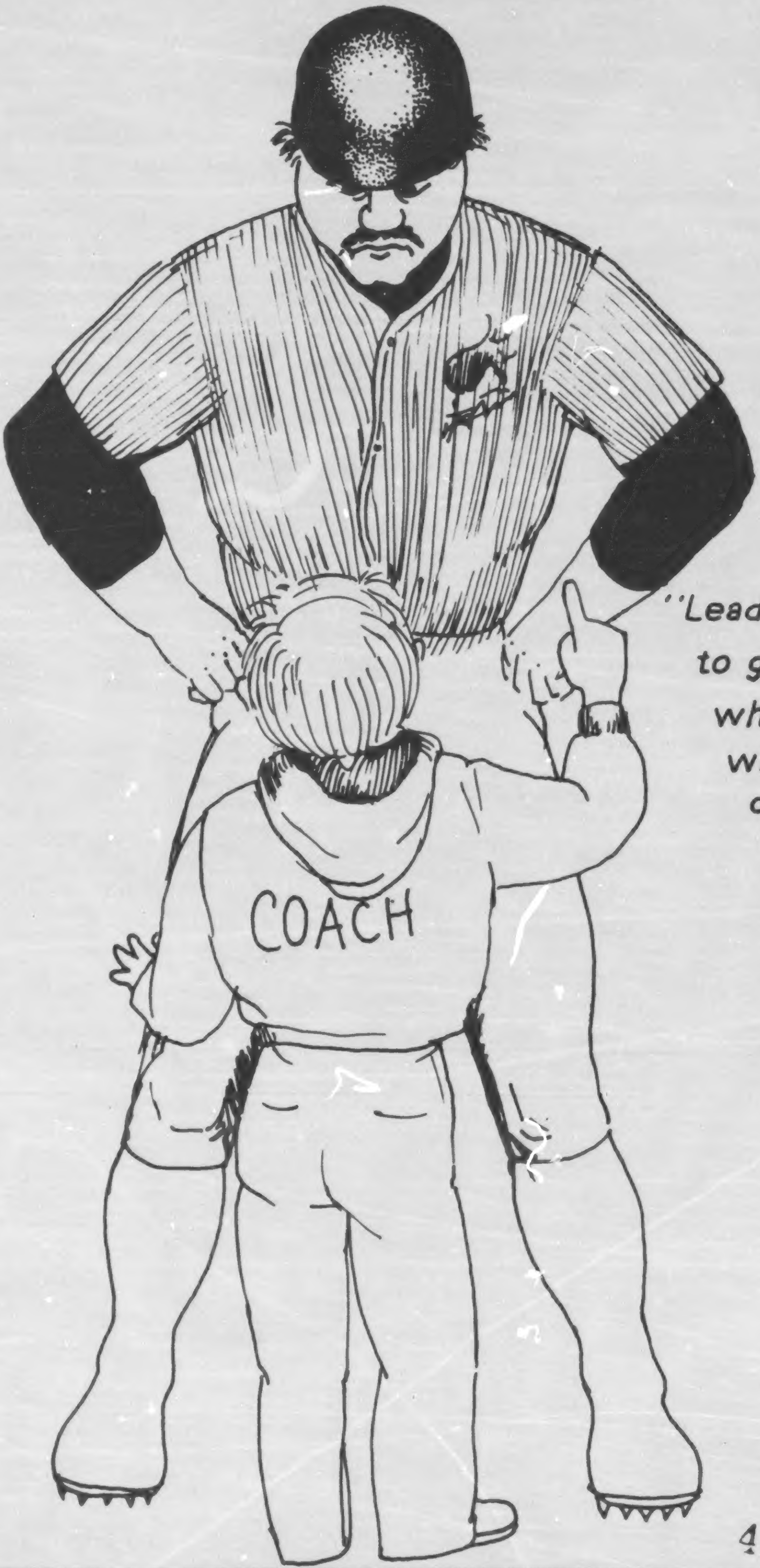
1. Allows group members to express their ideas and opinions.
2. Always listens to others.
3. Supervises only as needed, allowing individuals to use their own judgment.
4. Is considerate of the feelings of others.
5. Knows each individual's characteristics.
6. Rewards the group's efforts and is tactful when making criticisms.

(NOTE: This style works well with a cooperative group and when things are going well).

C. Loose rein leader--Very little control by the leader. Allows the people to do "their own thing" most of the time.

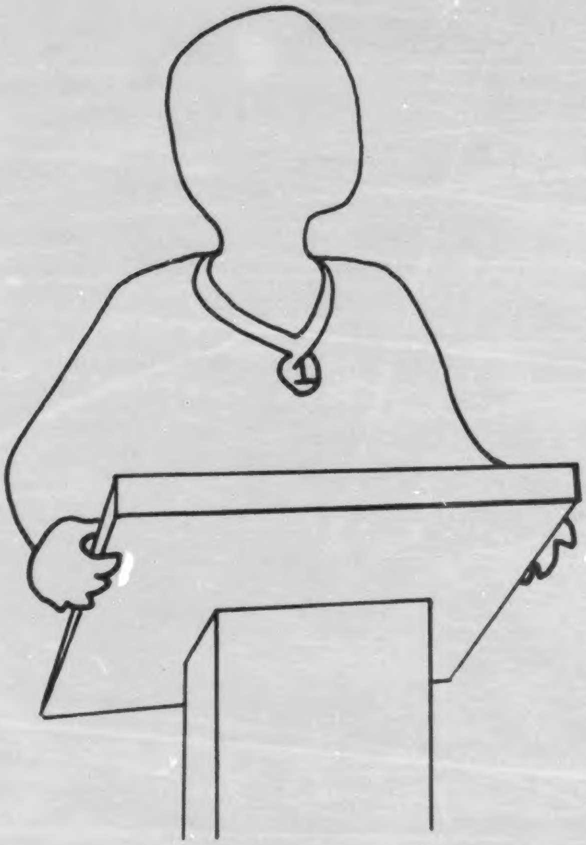
1. The group or organization does the work with very little control or direction.
2. This style works well with responsible people who like to work alone.

LEADERSHIP



"Leadership is the ability to get a person to do what you want done, when you want it done, in a way you want it done, because the person wants to do it."

QUALITIES OF A GOOD LEADER

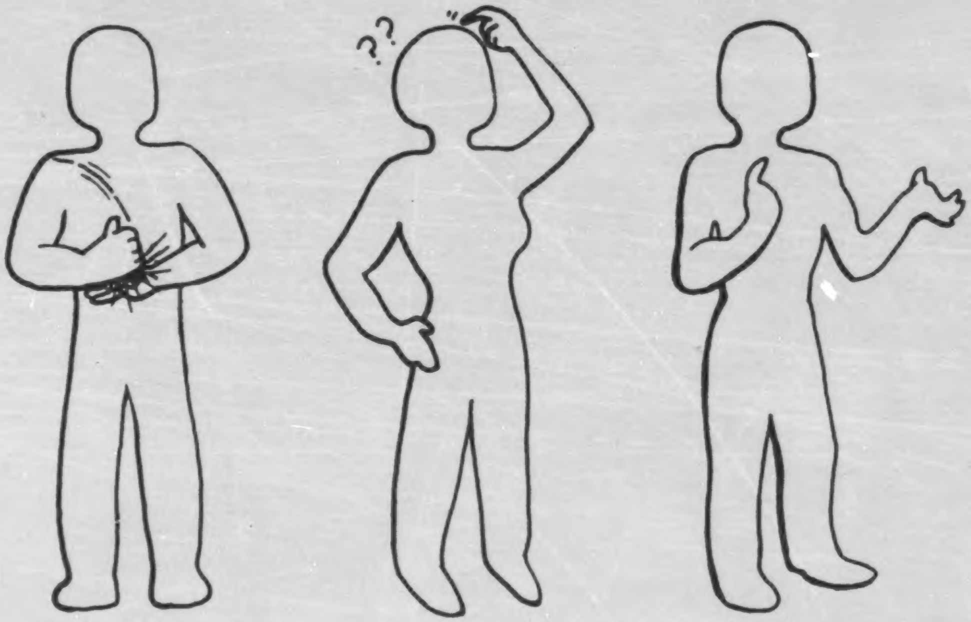


is

- *DIPLOMATIC*
- *ENERGETIC*
- *HONEST*
- *MENTALLY ALERT*
- *OPEN-MINDED*
- *PROGRESSIVE*
- *SELF-CONFIDENT*
- *TACTFUL*
- *TOLERANT*

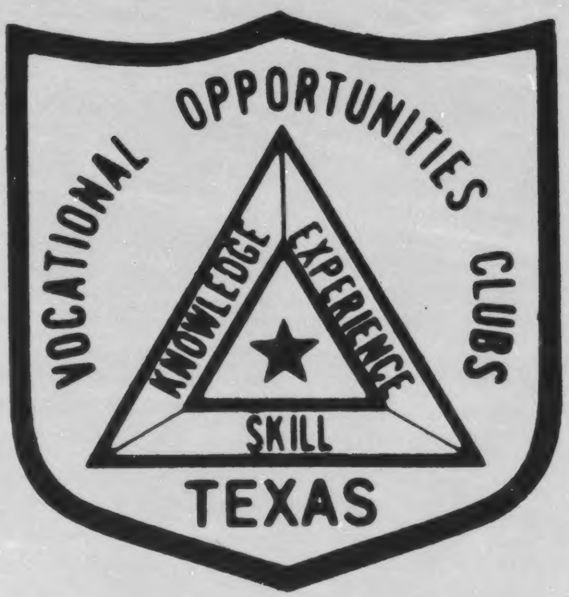
- *LISTENS*
- *INSPIRES OTHERS*
- *IS LOYAL TO FIRM*
- *HAS A SENSE OF HUMOR*
- *ASSUMES RESPONSIBILITY*
- *COOPERATES WITH OTHERS*

CHOOSING A LEADERSHIP STYLE

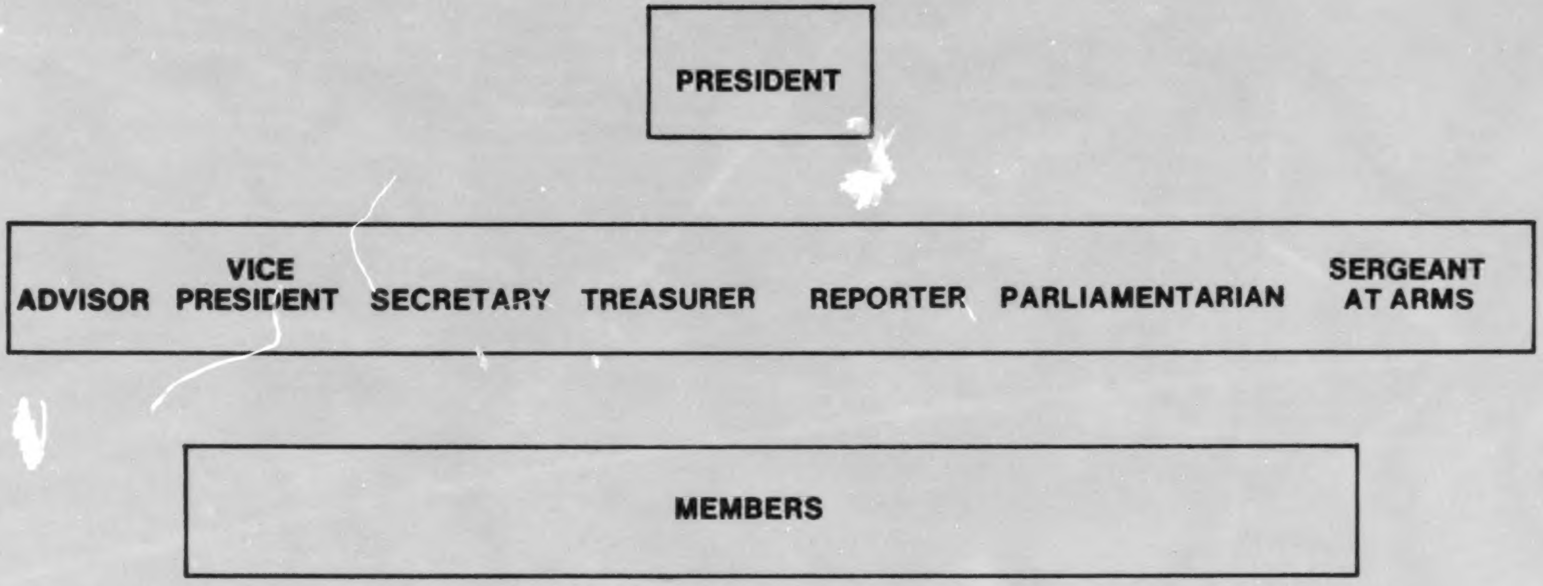


	Autocratic	Democratic	Loose-rein
ADVANTAGE	Quick decisions and discipline especially in crisis situations.	A true leader may emerge from the group.	Group members who help made a decision are more likely to be interested in carrying it out.
DISADVANTAGE	Group interest in carrying out decisions tends to be low.	Often leads to confusion, disorganization, indecision. May take too long to make and carry out decisions.	Takes longer to make decisions. Not practical in crisis situations.
USEFULNESS IN WORK SITUATIONS	May be the best style for crisis situations when decisions must be made quickly.	Not usually suitable, because of confusion and time it takes to make and carry out decisions.	Most useful in non-crisis situations where it is helpful to have group members involved in carrying out decisions.

THE VOCT EMBLEM

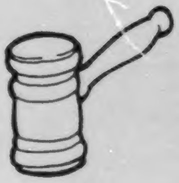

VOCATIONAL OPPORTUNITIES CLUBS
KNOWLEDGE
EXPERIENCE
SKILL
TEXAS

SEATING OF OFFICERS AT A CHAPTER MEETING


PRESIDENT
ADVISOR
VICE PRESIDENT
SECRETARY
TREASURER
REPORTER
PARLIAMENTARIAN
SERGEANT AT ARMS
MEMBERS

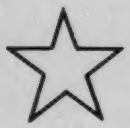
SYMBOLS OF OFFICERS AND ADVISORS

President



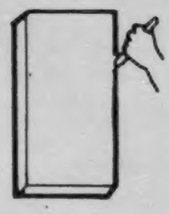
GAVEL

Vice-President



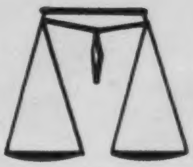
STAR

Secretary



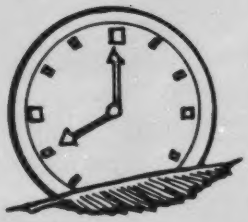
SCRIBER & TABLET

Treasurer



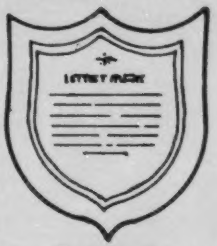
BALANCE

Reporter



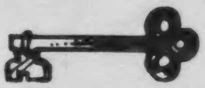
CLOCK & PEN

Parliamentarian



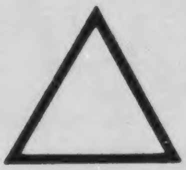
SHIELD

Sergeant-at-Arms



KEY

Advisor



TRIANGLE

SUGGESTED CALENDAR

AUGUST

Publicize VOCT through public service announcements on local radio and TV stations.

Prepare club yearbook

SEPTEMBER

"Get Acquainted" party for prospective members

Initiation of new members

Advisory Committee meeting

OCTOBER

Enter float in Homecoming parade
Serve as guides at Parents' Night
Send representative to Leadership conference

NOVEMBER

Hayride for members and guests
Fundraiser for December project

DECEMBER

Sponsor a "Decorate a Door" contest in school
Project to assist a needy family

JANUARY

"Winter Doldrums" party

Publish a club newsletter

Study hard--make good grades on finals!

FEBRUARY

Present an Assembly program

Honor teachers on Valentine Day

MARCH

Help with "Get-Out-The Vote" campaign

Get ready for contests

APRIL

Enter area and state contests

Elect officers

MAY

Install officers at annual banquet
Honor Advisory Committee members

UNIT II

LEADERSHIP DEVELOPMENT

ASSIGNMENT SHEET 1--IDENTIFYING LEADERS

A. In my opinion the following five well-known people possess true leadership qualities:

1. ______________________ because ____________________________
____
____.

2. ______________________ because ____________________________
____
____.

3. ______________________ because ____________________________
____
____.

4. ______________________ because ____________________________
____
____

5. ______________________ because ____________________________
____
____.

B. The person I most admire and want to be like is _______________.
In my opinion he/she is a leader because _______________________
____
____
____

C. Plan to become a good leader by answering the following questions about yourself and why you feel that way.

1. I will become a good follower first by ______________________
____
____

2. My strong points that I can build on are ____________________
____
____

3. My weak points that need improving are ______________________
____
____

4. The qualities of leadership I want to attain are ____________
____
____

5. I believe (or I do not believe) that leaders need to be trained because ____
____

D. Think of two people you know who are in leadership positions. How were they chosen to fill the position?

1.

2.

E. What are some of the reasons that you could be chosen for a leadership position? Finish this sentence: I feel that I could be chosen for a leadership position because I ____________________
____
____
____

F. How would you act in your new leadership position? Finish this sentence: In my new leadership position, I would act (like) _____
____
____
____

G. A good leader has to possess many positive attitudes. Think of an important leadership quality that begins with each letter of the word "Leadership" written below. Do not use any word more than once.

L
E
A
D
E
R
S
H
I
P

UNIT II

LEADERSHIP DEVELOPMENT

INFORMATION SHEET 2--INTRODUCTION

I. Purposes of the VOCT organization

   A. To develop a respect for education through academic experiences coordinated with vocational skill development.

   B. To promote an understanding and appreciation for the responsibilities of citizenship, the world of work, and the American way of life.

   C. To develop leadership abilities through participation in educational, vocational, civic, recreational, and social activities.

   D. To develop the ability of students to organize activities through the use of the democratic process.

   E. To further develop respect for all individuals, as well as to develop self-respect.

   F. To motivate students through involvement in competitive events and local club activities.

   G. To strengthen the confidence of students in themselves and their work.

   H. To develop individual pride in workmanship

II. VOCT Creed

I believe in the worthiness of work and I will try my best to be a good worker.

I believe in freedom and the American way of life.

I believe in education and I will try to make the best use of the knowledge and skills that I learn.

I believe in being fair and honest.

I believe to gain respect for myself, I must be respectful of others.

I believe satisfaction is gained from good work.

III. VOCT Pledge

Upon my honor, I will train myself through study and practice to become an honorable worker. I will uphold the ideals of my vocation and the Vocational Opportunities Clubs of Texas.

IV. VOCT Motto

Preparing today for the world of work.

V. VOCT Colors

Red, white, and blue, the colors of our great state and nation.

VI. VOCT Code of Ethics

VOCT Members should:

Exercise proper respect for the rights of others.

Respect and obey the rules and policies of the school.

Dress in an appropriate and acceptable manner for all occasions.

Take an active part in all club work.

Uphold and practice the true meaning of the creed and pledge.

Be a good sport in all club-sponsored activities.

Strive for better health of body and mind.

Be industrious at school and at work so that a better knowledge of the chosen occupation might be obtained.

Practice the golden rule.

VII. The meaning of the VOCT symbols

A. Gavel--Represents the principles of justice to all.

B. Lone Star of Texas--The five points represent the Home, the School, Industry, the Community, and the State of Texas.

C. Scriber and Tablet--Represents the history of man.

D. Balance--Represents justice in the weighing of labor and its rewards.

E. Clock and Pen--Represents the passing of time and the necessary reporting of what we do.

F. Shield--Represents patriotism.

G. Key--Represents safekeeping of club equipment and members.

H. Triangle--Represents guidance to help club members obtain knowledge, gain experience, and develop skills.

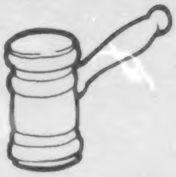
UNIT II

LEADERSHIP DEVELOPMENT

INFORMATION SHEET 3--CLUB MEETINGS

I. Duties of officers and symbols of each office

  A. President--Conducts meetings according to parliamentary procedure.

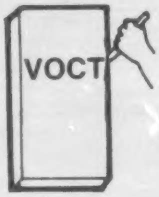


GAVEL

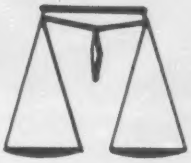
STAR

  B. Vice-president--Assists the president, and takes responsibility for committees

  C. Secretary--Prepares minutes and reads them at meetings



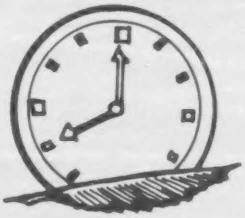
SCRIBER & TABLET



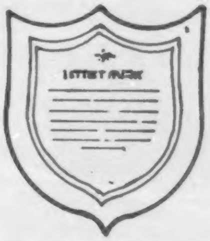
BALANCE

  D. Treasurer--Receives and keeps chapter funds in a business-like and safe manner

  E. Reporter--Takes care of all club publicity



CLOCK & PEN



SHIELD

  F. Parliamentarian--Advises the club officers on points of parliamentary procedure

  G. Sergeant-at-Arms--Arranges meeting room and cares for chapter equipment

KEY

  H. Advisor--Assumes the responsibility of organizing the chapter and of advising club members on matters concerning club business

TRIANGLE

II. Things that make a good meeting

- A. Carefully planning in advance.
- B. Starting and closing the meeting on time.
- C. Moving the business meeting along with enthusiasm.
- D. Following the order of business explained in the Leadership Handbook.
- E. Using correct parliamentary procedure.
- F. Using the official opening and closing ceremonies.
- G. Displaying chapter and officer banners.
- H. Holding meetings in a comfortable meeting place.
- I. Presenting well-prepared committee reports.
- J. Demonstrating knowledge of the duties of one's office.
- K. Holding the interest and attention of all members.
- L. Providing an opportunity for all members to participate.
- M. Teaching members to work together.
- N. Including both business and entertainment.

III. Order of a business meeting

- A. Opening ceremony.
    - 1. Officers explain their symbols and duties.
    - 2. Pledge of allegience.
    - 3. Introduction of guests.
- B. Regular order of business.
    - 1. Roll call.
    - 2. Minutes of previous meeting.
    - 3. Reports by officers.
    - 4. Committee reports.
        - a. Standing committees
        - b. Special committees

    5. Unfinished business
    6. New business
- C. Program
    1. Speakers
    2. Educational activities

       Examples: Films and demonstrations
    3. Presentation of honors and awards
- D. Special ceremonies-when necessary
    1. Initiations
    2. Installation of officers
    3. Granting of honorary memberships
- E. Closing ceremony
- F. Entertainment

UNIT II

LEADERSHIP DEVELOPMENT

INFORMATION SHEET 4--GUIDELINES FOR CLUB ACTIVITIES

I. Purposes of club activities

   A. To develop a spirit of cooperation.

   B. Provide an understanding of competition.

   C. Present a recognition of social values.

   D. To develop an ability to communicate.

   E. Provide for individual recognition.

   F. Realization of the responsibilities of leadership and fellowship.

II. Types of activities

   A. Civic--Projects that produce good public relations and opinion of the club within the community.

   B. Educational--Activities that relate to the students career goals training.

   C. Recreational--Activities that provide body and mind building exercises.

   D. Social--Events that can help the student learn how to mix with and enjoy the company of other people.

   E. Vocational--Activities that relate to the skill training of the student.

III. Reasons for planning a yearly calendar

   A. Provides a working plan that may be built upon.

   B. Organizes all of the chapter's activities.

   C. Keeps the students informed.

   D. Keeps others informed.

      1. Vocational Director

      2. Principal

      3. Community

   E. Is a means of publicity.

IV. Things to include on a yearly calendar

A. All official chapter functions.

B. All contests.

C. Contest practice and preparation times.

D. Publicity deadlines.

Examples:
1. VOCT *Newsletter* (September, January, April)
2. Contest awards
3. Special projects

E. Alternate dates for special events

Examples:
1. Employer-employee banquet
2. Project exhibits
3. Community services
4. Fund raisers

UNIT II

LEADERSHIP DEVELOPMENT

ASSIGNMENT SHEET 2--PREPARE A CLUB CALENDAR

Directions: Use the following list of VOCT club activities and any others brainstormed by the club members to develop a year's calendar. Use the calendar form on the next page to organize the events by month

Field Trips
Radio or TV Program
Fund Raising
Fair exhibit
Boss Breakfast
Assembly Program
Regular Meetings
Alumni Activities
Social Activities
Civic Club Appearances
Panel Discussion
Homecoming Parade
Chapter Newsletter
Faculty Recognition
Election of Officers
Helping Hand Project
Professional Meetings
Savings Club Program
Area and State Leadership Conference

Fashion Show
Radio Program
Parents' Night
Guest Speakers
Installation of Officers
Local Publicity Releases
Initiation of New Members
Employer-Employee Banquet
"Good Citizenship" Project
"Get-Out-To-Vote" Project
"Cleanup" Project
Executive Committee Meetings
"Student Day" at Local Businesses
Reception for Prospective Students
Follow-up Survey of Former Students
Advisory Committee Meetings
Area and State Contest

CLUB CALENDAR

AUGUST

SEPTEMBER

OCTOBER

NOVEMBER

DECEMBER

JANUARY

FEBRUARY

MARCH

APRIL

MAY

UNIT II

LEADERSHIP DEVELOPMENT

TEST PART 1

1. Explain what leadership means to you.

2. Identify the reasons why a person should want to become a good leader by filling in the blanks with the correct words from the list below.

Maturity

opinion

avoid

goals

challenges

self-confidence

listen

leadership

a. Leadership training can help the individual gain ____________ and ____________________________ .

b. A person also learns to _________________ and _______________ the opinion of others.

c. An individual learns to move on and openly face new _________ ____________________________ .

d. Leadership provides an opportunity to reach _________________ faster.

e. _______________________ is something that can be applied to other aspects of an individuals life.

3. Choose the correct steps to becoming a good leader by answering "True" or "False" to each statement below.

_____ a. Become a good follower

_____ b. Learn your strong and weak points

_____ c. Tell everyone about your strong points

_____ d. Associate with people who are not leaders and lead them.

_____ e. Study the qualities of a leader

_____ f. Make plans to work toward becoming a leader

_____ g. Take part in the youth leadership program

4. Point out the ways to demonstrate leadership potential by placing a "✓" in front of each listed below.

_____a. Be willing to assume responsibility

_____b. Encourage others to do your work for you

_____c. Take pride in doing a good job

_____d. Be a good listener

_____e. Judge people by your first thoughts

_____f. Be fair and impartial

_____g. Realize that your responsibility is to let others share responsibility with you

5. Select good leadership qualities by answering "yes" or "no" to each statement below.

_____a. Shows an ability to control others

_____b. Is honest and fair in all dealings

_____c. Shows enthusiasm

_____d. Knows when to "give up."

_____e. Gives criticism in a positive manner

_____f. Has a sense of humor

_____g. Is a good listener

_____h. Is disloyal

_____i. Assumes responsibility

_____j. Takes credit for work done by others

_____k. Is uncooperative with others

_____l. Is understanding

_____m. Makes individuals feel good about themselves and their work

6. Name the three leadership styles by writing the name in the correct blank below.

a. The leadership style in which one person possesses all of the power and makes all the decisions is the _____________ style.

b. When a leader has very little control and allows members to "do their own thing," then the _______________ _______________ style of leadership is being used.

c. When all people involved help in decision making and the opinions of individuals are considered, the leadership style used is ____________________.

UNIT II

LEADERSHIP DEVELOPMENT

TEST PART 2

1. Point out the purpose of the VOCT organization by placing a "√" in front of each correct statement.

   _____ a. To develop a respect for education through academic experiences coordinated with vocational skill development.

   _____ b. To promote an understanding and appreciation for the world of work.

   _____ c. To develop leadership abilities.

   _____ d. To get out of regular classroom studies.

   _____ e. To develop the ability to organize activities by using the Democratic process.

   _____ f. To further develop respect for all individuals.

   _____ g. To motivate students through involvement in competition and club activities.

   _____ h. To embarrass students in front of others.

   _____ i. To develop pride in one's trade.

2. Explain what each of the parts of the VOCT Creed means to you

   a. I believe in the worthiness of work and I will try my best to be a good worker.

   b. I believe in freedom and the American way of life.

   c. I believe in education and I will try to make the best use of the knowledge and skills that I learn.

   d. I believe in being fair and honest.

e. I believe that to gain respect for myself, I must be respectful of others.

f. I believe satisfaction is gained from good work.

3. Write the VOCT pledge from memory.

4. Explain the meaning of the VOCT motto:

"Preparing today for the world of work"

5. Point out the VOCT colors by circling three from the list below

gold
blue
orange
green
pink
red
black
violet
white
tan

6. Select the rules of the VOCT code of ethics from the list by placing a "✓" in front of each correct statement.

_____ a. Exercise proper respect for the rights of others

_____ b. Respect and obey only the school policies that are easy to follow

_____ c. Dress in a manner that is not accepted by others

_____ d. Take an active part in club work

_____ e. Uphold and practice the true meaning of the creed and pledge

_____ f. Cheat in all club-sponsored activities

_____ g. Strive for better health of body and mind

_____ h. Be industrious at school and at work so that a better knowledge of the chosen occupation might be obtained

_____ i. Practice the golden rule

7. Point out the meaning of each of the VOCT symbols by writing the number of the symbol in the correct blank at the left.

_____ a. Represents the principles of justice to all

_____ b. The five points represent the home, the school, industry, the community, and the state of Texas

_____ c. Represents the history of man

_____ d. Represents justice in the weighing of labor and its rewards

_____ e. Represents the passing of time and the necessary reporting of what we do

_____ f. Represents patriotism

_____ g. Represents safe keeping of club equipment and members

_____ h. Represents guidance to help club members obtain knowledge, gain experience, and develop skills

1. Key
2. Balance
3. Gavel
4. Triangle
5. Subscriber and tablet
6. Shield
7. Lone Star of Texas
8. Clock and pen

LEADERSHIP DEVELOPMENT

TEST PART 3

1. Identify the duties and symbols of the offices for VOCT by writing the name of each office and the numbers of the duties in the spaces provided.

Duties Name of Office

_____ a.

_____ b.

_____ c.

_____ d.

_____ e.

_____ f.

_____ g.

_____ h.

(1) Advises the club officers on points of parliamentary procedure

(2) Receives and keeps chapter funds in a safe, businesslike manner

(3) Assists the president and takes responsibility for committees

(4) Takes care of all club publicity

(5) Arranges meeting room and cares for chapter equipment

(6) Assumes the responsibility of starting the chapter and giving advice concerning club business to the members

(7) Conducts meetings according to parliamentary procedure

(8) Prepares and reads minutes of meetings

2. Point out the things that make a good meeting by placing a "✓" in front of each correct statement.

_____ a. Careful planning in advance

_____ b. Starting and closing the meeting on time

_____ c. Keeping the business meeting slow and dull

_____ d. Trying a new order of business at each meeting

_____ e. Using no parliamentary procedure so things will be discussed openly

_____ f. Using the official opening and closing ceremonies

_____ g. Displaying chapter and officer banners

_____ h. Holding meetings in a comfortable place

_____ i. Including well-prepared committee reports

_____ j. Keeping most members from participating

_____ k. Having business with no entertainment

3. Point out the correct order of business by numbering the following items 1 through 7.

_____ a. Program (speakers)

_____ b. Closing ceremony

_____ c. Entertainment

_____ d. Opening ceremonies

_____ e. Special ceremonies (initiations)

_____ f. Reports

_____ g. Business

UNIT II

LEADERSHIP DEVELOPMENT

TEST PART 4

1. Point out the purposes of club activities by placing a "✓" in front of each correct statement below

Club activities provide:

_____ a. for the development of a spirit of cooperation

_____ b. an understanding of competition

_____ c. an opportunity to get out of classroom work

_____ d. a recognition of social values

_____ e. an ability to communicate

_____ f. individual recognition

_____ g. a way to get others to do all the work

2. Select the types of club activities by labeling each description with one choice from the list below.

Vocational | Recreational
Civic | Social
Educational

__________________ a. Projects that produce good public relations and opinion within the community.

__________________ b. Activities that relate to the students career goals training.

__________________ c. Activities that provide body and mind building exercises.

__________________ d. Events that can help the student learn how to mix with and enjoy the company of other people.

__________________ e. Activities that relate to the skill training of the student.

3. List three reasons why a club should plan a yearly calendar.

   a.

   b.

   c.

4. Select the events that should be included on a club's yearly calendar by circling the letter in front of each correct statement listed below.

   a. All chapter functions

   b. Birthdates of your friends

   c. All contests

   d. Contests practice and preparation times

   e. Publicity deadlines

   f. Mickey Moore's birthday

   g. Room for alternate dates of special events

UNIT II

LEADERSHIP DEVELOPMENT

ANSWERS TO TEST

Part 1

1. Leadership is the ability to develop confidence and loyalty in others, cause them to follow willingly, and to lead in a responsible way. A leader may not always be the individual who is in charge or has the commanding position.

2. a. maturity and self-confidence
   b. Listen and respect
   c. challenges
   d. goals
   e. leadership

3. a. True
   b. True
   c. False
   d. False
   e. True
   f. True
   g. True

4. a.
   c.
   d.
   f.
   g.

5. a. yes
   b. yes
   c. yes
   d. no
   e. yes
   f. yes
   g. yes
   h. no
   i. yes
   j. no
   k. no
   l. yes
   m. yes

6. a. Autocratic
   b. Loose-rein
   c. Democratic

Part 2

1. a. ✓
   b. ✓
   c. ✓
   d.
   e. ✓
   f. ✓
   g. ✓
   h.
   i. ✓

2. Evaluated to the satisfaction of the instructor.

3. Upon my honor, I will train myself through study and practice to become an honorable worker. I will uphold the ideals of my vocation and the Vocational Opportunities Clubs of TExas.

4. Evaluated to the satisfaction of the instructor.

5. red
   white
   blue

6. a. ✓
   b.
   c.
   d. ✓
   e. ✓
   f.
   g. ✓
   h. ✓
   i. ✓

7. a. 3
   b. 7
   c. 5
   d. 2
   e. 8
   f. 6
   g. 1
   h. 4

Part 3

a. 7 a. President
   3 b. Vice-President
   8 c. Secretary
   2 d. Treasurer
   4 e. Reporter
   1 f. Parliamentarian
   5 g. Sergeant-at-Arms
   6 h. Advisor

2. a.
   b.
   c.
   d.
   e.
   f.
   g.
   h.
   i.
   j.
   k.

3. a. 4
   b. 6
   c. 7
   d. 1
   e. 5
   f. 2
   g. 3

Part 4

1. a. ✓
   b. ✓
   c.
   d. ✓
   e. ✓
   f. ✓
   g.

2. a. Civic
   b. Educational
   c. Recreational
   d. Social
   e. Vocational

3. Answer should include three of the following five:

   a. All official chapter functions

   b. All contests

   c. Contest practice and preparation times

   d. Publicity deadlines

   e. Room for alternate dates of special events

4. a.

   c.

   d.

   e.

   g.

UNIT III

PERSONAL DEVELOPMENT

UNIT OBJECTIVE

After completion of this unit, the student will be able to discuss personal care, human relations in the shop, and assuming responsibility. This knowledge will be evidenced through demonstration and by satisfactorily completing the unit test.

SPECIFIC OBJECTIVES

After completion of this unit, the student will be able to:

1. Match terms associated with personal care to the correct definition.
2. Select the correct grooming habits.
3. Point out things to consider when selecting clothing.
4. Point out the types of food and recommended daily servings for each food group.
5. Point out the proper sleeping habits.
6. Select the terms associated with human relations.
7. Point out the reasons to study personalities.
8. Choose the correct order of steps for improving your personality.
9. Select the characteristics of a good personality.
10. Select the characteristics of a good fellow worker.
11. Point out the personality traits that should be avoided.
12. Select the reasons why people work.
13. Point out the reasons why most employees lose their jobs.
14. Select the basic ways of getting along with people.
15. Point out the advantages of handling responsibility.
16. Identify the ways which an individual uses to avoid responsibility.
17. Identify the characteristics of a responsible person.
18. Select the ways to get ahead on the job.

UNIT III

PERSONAL DEVELOPMENT

SUGGESTED TEACHING PROCEDURES

The instructor should assess each objective and activity of this unit in terms of appropriateness for their students and their community. Lessons may need to be combined or separated and inserted into the introduction to the subject matter or sprinkled throughout the total program. The PERSONAL DEVELOPMENT unit can be used in order to initiate the personal development of students. Constant reinforcement throughout the program can facilitate the internalization of these personal characteristics.

I. Objective Sheet

   A. Review all objectives and add any the instructor feels are appropriate.

   B. Discuss each specific objective with the students as it relates to the program.

II. Information and Assignment Sheets

   A. INFORMATION SHEET 1--PERSONAL CARE

      1. Review the terms and definitions to the students.

         (NOTE: If the students have student manuals encourage them to make notes in the margins.)

      2. Discuss proper grooming habits use ASSIGNMENT SHEET 1--TAKING A LOOK AT YOURSELF

         (NOTE: This exercise can be used to generate class discussion, in addition to being a self-rating instrument.)

      3. Introduce the clothing selection unit with a "how not to dress" example.

         a. TM-1--DRESS AT WORK

         b. TM-2--APPROPRIATE DRESS

      4. Introduce the section on Proper Foods.

         (NOTE: A panel of students or an outside resource person might provide extra emphasis on the importance of good nutrition. TM-3--FOUR BASIC FOOD GROUPS can be used here.)

5. Discuss the importance of adequate sleeping habits to enable one to do their job.

   (NOTE: This could be combined with four above.)

B. INFORMATION SHEET 2--HUMAN RELATIONS IN THE SHOP

1. Present and discuss the terms and definitions used in the discussion of human relations.

2. Introduce reasons why the need to study personalities.

   a. Use TM-4 GOOD HUMAN RELATIONS

   b. ASSIGNMENT SHEET 2--LEARNING ABOUT CLASS MEMBERS

      (NOTE: Use this excercise to emphasize that knowing fellow workers/classmembers is beneficial to getting along with others.)

3. Discuss ways personalities can be changed.

   a. ASSIGNMENT SHEET 3--PERSONALITY RATING SHEET

   b. Review the rating sheet in class after the student has completed the assignment.

   c. Have students select one or two characteristics to work on improving

4. Review and Discuss the characteristics of a good personality

5. Introduce characteristics of a good fellow worker.

   (NOTE: A local employer as a guest to discuss with students what they expect from good workers would be of great benefit.)

   a. ASSIGNMENT SHEET 4--HUMAN RELATIONS WITH FELLOW STUDENTS AND WORKERS

      (NOTE: A classroom review of the assignment can open communication as to why somethings are the wrong answer in addition to supporting the correct response.)

6. Ask the students what they think the personality traits are they should avoid and list them on chalkboard.

7. Discuss reasons people work. Have each student add one additional reason to the list.

8. Introduce concept of why most people lose their job. Don't forget lay-offs, strikes, and other reasons.

9. Introduce through class discussion ways to get along with people. Develop or discuss an example of each.

C. INFORMATION SHEET 2--ASSUMING RESPONSIBILITY

1. Introduce and review the advantages of handling responsibility.

2. Introduce ways to avoid responsibility. Utilize excuses in the classroom, i.e. my dog ate my assignment.

a. TM-5 EXCUSES--SELECT ONE

b. ASSIGNMENT SHEET 5--EXCUSES

(NOTE: This could be a homework assignment with awards for the best catagories of excuses.)

III. Transparency Masters

(NOTE: Transparency masters are included in the student manual and can be used as information sheets.)

A. TM-1 DRESS AT WORK

B. TM-2 APPROPRIATE DRESS

C. TM-3 FOUR BASIC FOOD GROUPS

D. TM-4 GOOD HUMAN RELATIONS

E. TM-5 EXCUSES--SELECT ONE

IV. Evaluation

A. The unit test is divided into three parts.

(NOTE: Each part covers one information sheet.)

B. Various approaches may be used in testing.

(NOTE: Frequent testing improves study methods and retention.)

UNIT III

PERSONAL DEVELOPMENT

INFORMATION SHEET 1--PERSONAL CARE

I. Terms and Definitions

   A. Acne--Skin problem common with teenagers

   B. Allergies--Bodily reactions to various food, fibers, etc.

   C. Antiperspirant--A product that keeps underarms dry and odor-free

   D. Astringents--Lotions containing some alcohol which are used to clean the face

   E. Cuticle--Thin dead skin at the sides and base of a fingernail or toenail

   F. Fatigue--Being tired

   G. Manicure--To trim, file and buff fingernails

II. Grooming Habits

   A. Good Health

      1. Bathe daily

      2. Exercise regularly

      3. Get sufficient sleep

      4. Brush teeth (as often as possible)

      5. Eat regular meals

   B. Appearance

      1. Shave as often as required

      2. Clean and manicure nails

      3. Brush hair into an attractive style

      4. Use a deodorant or antiperspirant

      5. Shampoo hair as needed

      6. Wear appropriate clothing

      7. Practice good posture

III. Clothing Selection

A. Clothing should be practical for the wearer, which includes easy care.

B. When selecting new items, the buyer should consider:

1. Fit and comfort
2. Purpose and place to be worn
3. Personality
4. Body shape
5. Price of items and one's clothing budget
6. Workmanship
7. Fabric type and upkeep
8. Color, line, and style
9. Life expectancy
10. How it would go with other clothing

C. Clothing for work must be

1. Comfortable
2. Durable
3. Safe
4. Suitable and well-fitting
5. Easily kept clean

D. Clothing does not have to be new to be clean, well-fitting, or suitable for work

IV. Eating Proper Foods

A. To look trim and alert, individuals should keep their weight according to their body structure

B. Select from all basic food groups each day

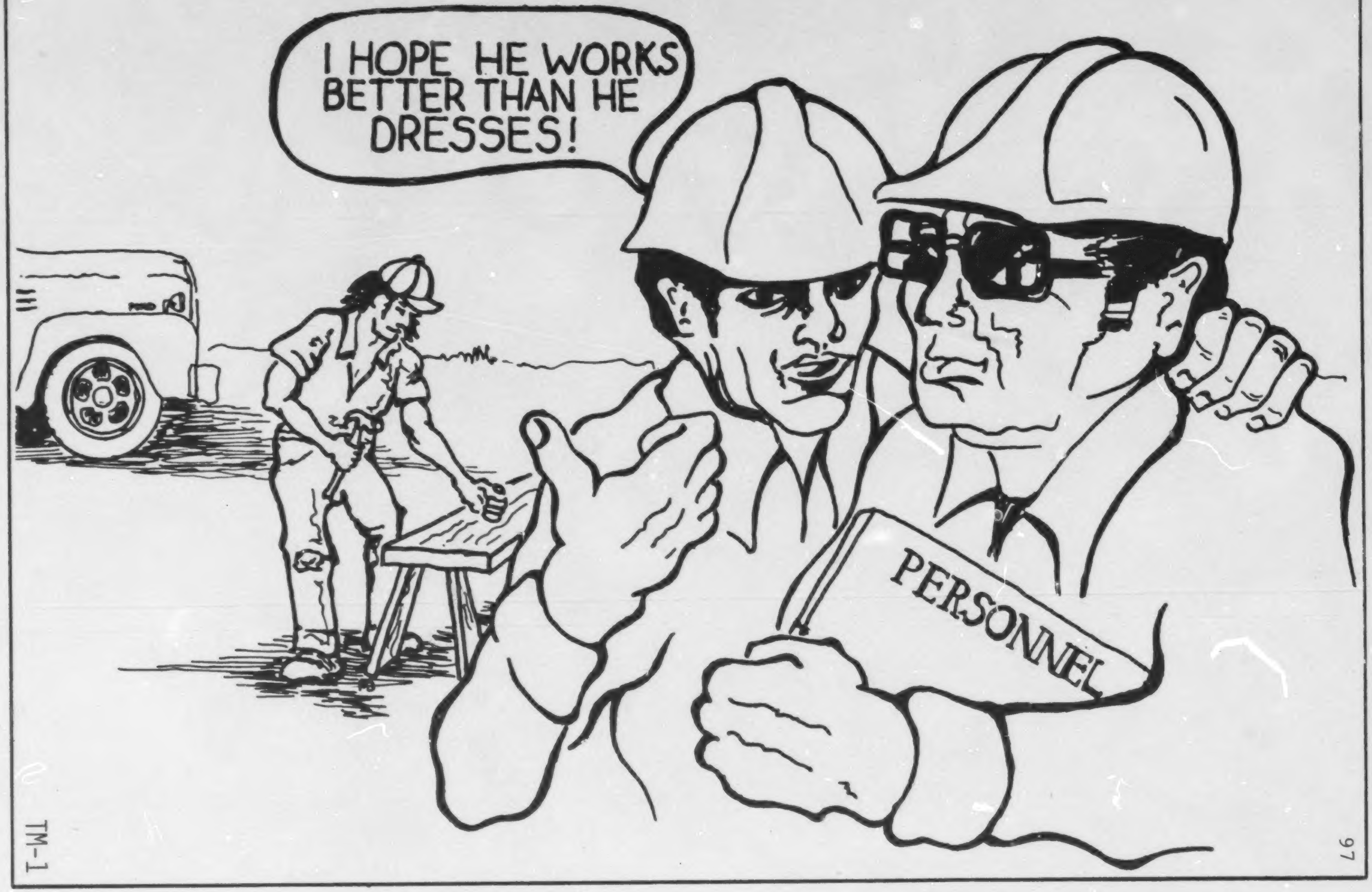
1. Milk--Includes cheese, ice cream, and other milk-made foods
2. Meat--Includes meats, fish, and poultry
3. Vegetables and fruits--Includes dark green and yellow vegetables, citrus fruit or tomatoes
4. Breads and cereals--Includes grain products

- C. Recommended servings for teenagers
    - 1. Milk--Four servings
    - 2. Meat--Two or more servings
    - 3. Vegetables and fruits--Four or more servings
    - 4. Breads and cereals--Four servings
- D. Proper foods, along with proper sleep and exercise, produce a good complexion, shiny hair, a glowing appearance, and plenty of energy

V. Good sleeping habits

- A. Get some exercise every day
- B. Avoid foods which are hard to digest
- C. Follow a schedule to get to bed at the same time every night
- D. Avoid excitement before bedtime
- E. Avoid worrying when getting to bed
- F. Make sure bed covering is adequate
- G. Wear comfortable sleep wear
- H. Make sure room is properly ventilated
- I. Darken room and shut out noises

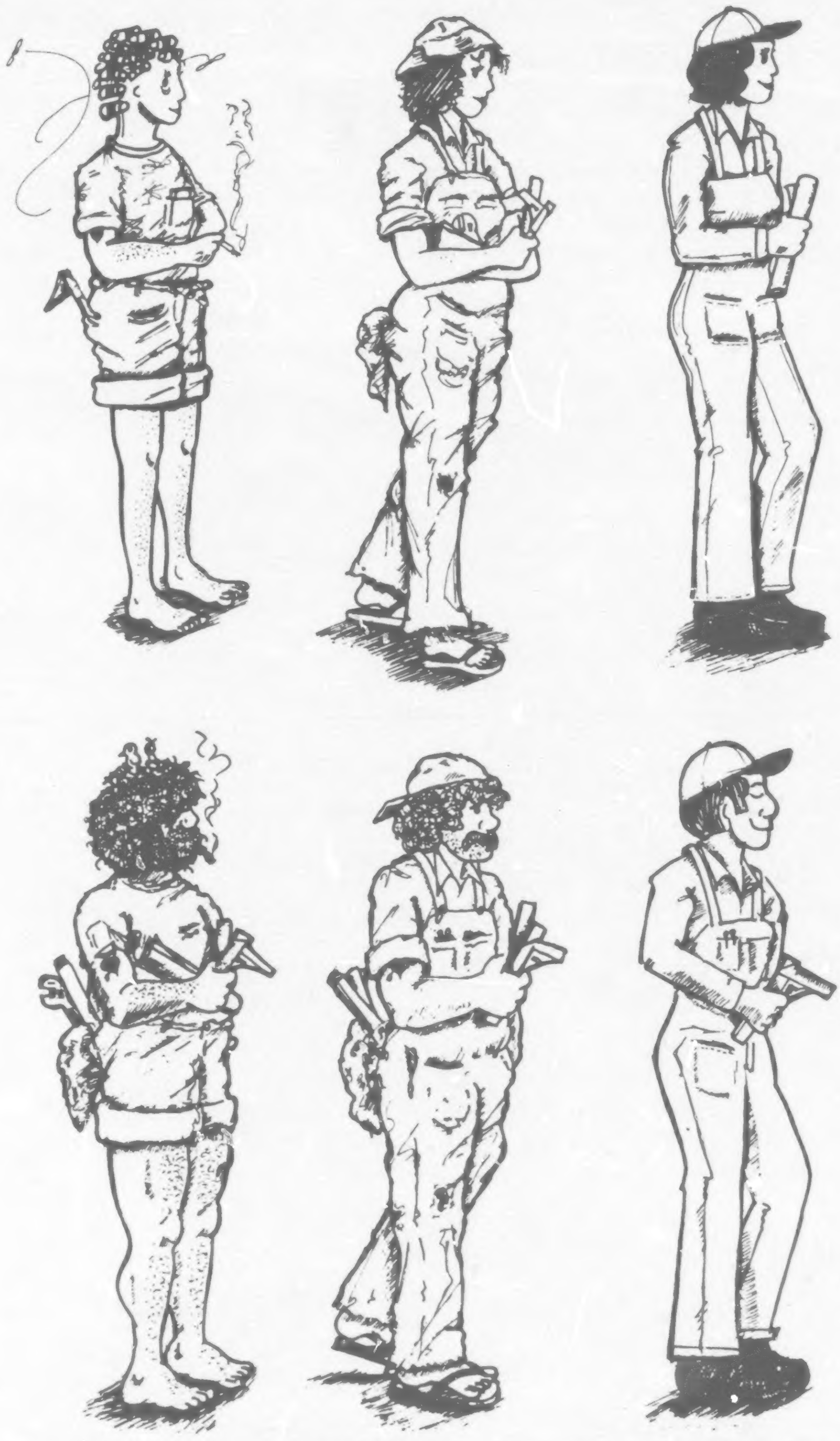
DRESS AT WORK


I HOPE HE WORKS BETTER THAN HE DRESSES!
PERSONNEL

TM-1

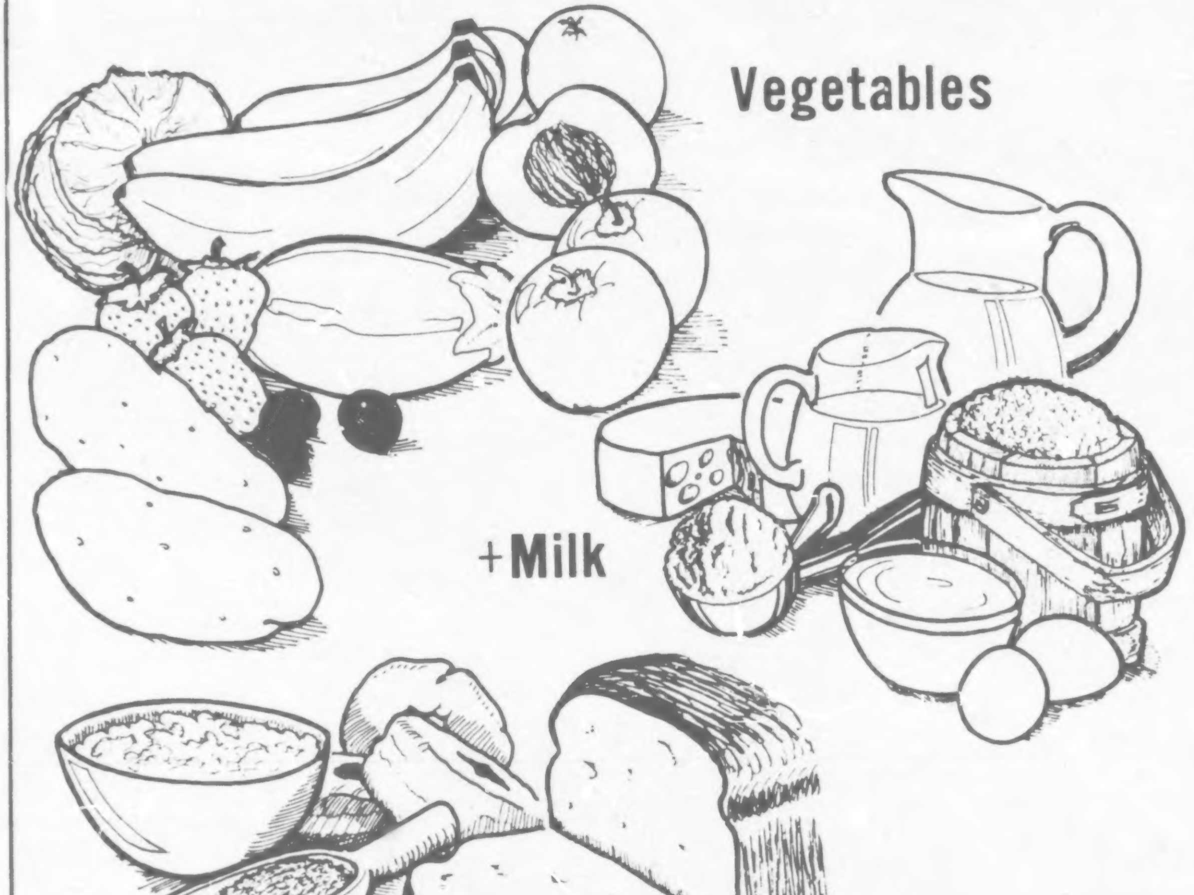
97

APPROPRIATE DRESS



TM-2

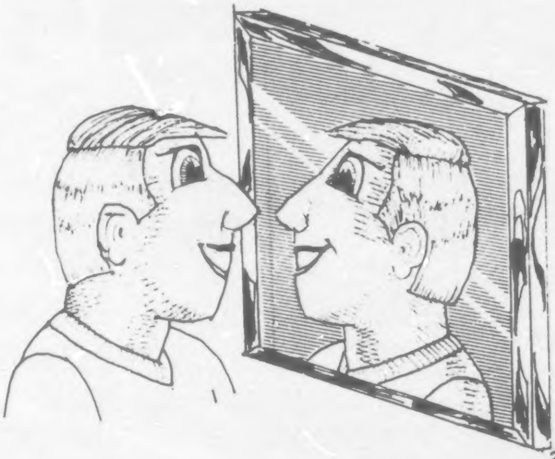
FOUR BASIC FOOD GROUPS


Vegetables
+Milk
+Breads & Cereals
+Meats=
Good Health!

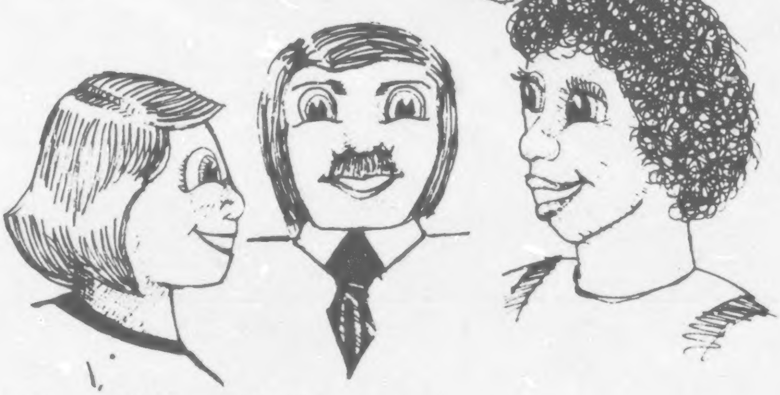
TM-3

GOOD HUMAN RELATIONS

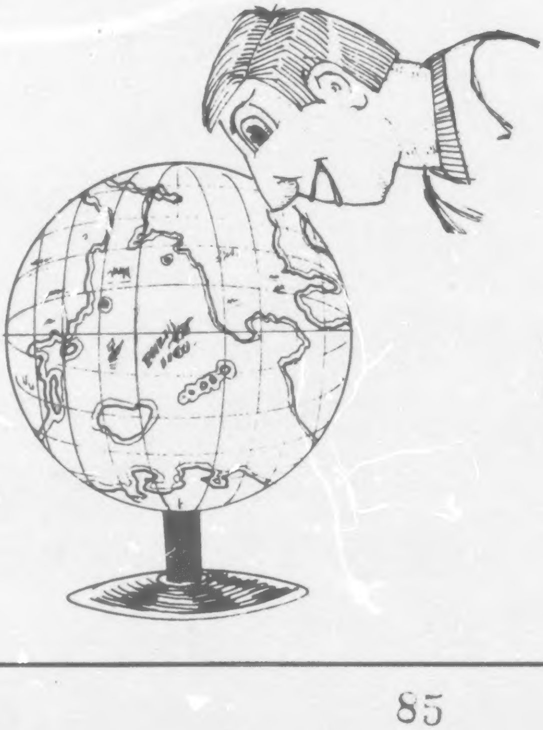
PEOPLE WITH GOOD HUMAN RELATIONS . . .



FEEL COMFORTABLE ABOUT THEMSELVES



FEEL RIGHT ABOUT OTHER PEOPLE



ARE ABLE TO MEET THE DEMANDS OF LIFE

EXCUSES -- SELECT ONE

EVER USE ONE OF THESE?

If I had one more chance.

"THEY" DON'T LIKE ME.

"THEY" DON'T UNDERSTAND.

"If they" would leave me alone.

I HAVE A LOT OF PROBLEMS.

"NO ONE" EVER GIVES ME ENOUGH TIME.

I JUST DON'T LIKE THAT KIND OF WORK.

I didn't feel good.

UNIT III

PERSONAL APPEARANCE

ASSIGNMENT SHEET 1--TAKING A LOOK AT YOURSELF

Directions: Rate yourself on each of the following questions, using a scale of "6"-Always, "4"-Usually, "2"-Occasionally, and "0"-Never. When you have completed the evaluation, add your score and compare it to the rating scale provided.

QUESTIONS	RATING
A. Do you take a bath or shower daily?	______
B. Do you use an effective deodorant or antiperspirant daily?	______
C. Do you use a foot spray or powder daily?	______
D. Do you shave as often as needed?	______
E. Do you put on clean clothes daily?	______
F. Do you put on clean socks or hose daily?	______
G. Do you clean your face thoroughly at least twice a day (more often if you have oily skin)?	______
H. Do you use soap when you wash your hands?	______
I. Do you clean your fingernails daily?	______
J. Do you wash your hands before meals and after using the bathroom?	______
K. Do you wash your hair as often as needed?	______
L. Do you observe your shop's rules about hair?	______
M. Do you have your hair cut or trimmed regularly?	______
N. Do you use a dandruff shampoo and/or cream rinses and conditioner if needed?	______
O. Do you brush your teeth at least twice daily?	______
P. Do you use a mouthwash daily?	______
Q. Do you get enough sleep and rest so that you feel refreshed?	______
R. Do you take a good look at yourself in a full mirror before leaving the house?	______

S. Do you take a few minutes during the day to freshen your looks and comb your hair? ______

T. Do you use breath fresheners during the day or after eating foods with unpleasant odors? ______

TOTAL ________________

Rating:

104 - 120	You take pride in your appearance
88 - 103	You'd probably pass inspection
73 - 87	You're not really trying
Less than 73	Your best friend won't even tell you

UNIT III

PERSONAL DEVELOPMENT

INFORMATION SHEET 2--HUMAN RELATIONS IN THE SHOP

I. Terms and Definitions

   A. Adaptable--The ability to adjust to various situations

   B. Attitude--The way one acts or feels about a situation

   C. Compliment--Words of appraisal or approval

   D. Personality--All of a person's traits that are noticeable in an individual's behavior

   E. Respect--Giving consideration to people and their thoughts

   F. Self-concept--The way you think of yourself

   G. Service--Giving of one's self, talent, and abilities

   H. Trait--A quality or characteristic of an individual

II. Four reasons to consider different personalities

   A. To understand ourselves

   B. To understand others

   C. To better live in our society

   D. To improve our personalities

III. Steps in improving your personality

   A. Decide that your personality can be improved

   B. Find out how your personality rates

   (NOTE: This can be done with the personality rating sheet in this unit.)

   C. Study this rating trait by trait

   D. Develop a plan of action

   E. Carry out your plan of action

IV. Characteristics of a good personality

   A. Cheerfulness

   B. Friendliness

   C. Forcefulness

D. Self-confidence

E. Tactfulness

V. Characteristics of a good fellow worker

A. Follows business rules and policies

B. Respects authority

C. Carries out assigned responsibilities

D. Goes more than halfway

E. Shows interest by being bright-eyed and alert

F. Shows your admiration and appreciation

G. Makes good use of constructive criticism

H. Contributes new ideas

I. Being honest

VI. Personality traits that should be avoided

A. "Politicking"

B. "Passing the buck"

C. "Apple-polishing"

D. "Clique forming"

E. "Gossiping"

VII. Reasons why people work

A. Satisfaction

B. Support family

C. Acceptance of peers

D. Power

E. Wealth

F. Achieve goals

VIII. Reasons employees lose their jobs

A. Unable to get along with fellow workers

B. Poor attendance and too often late to work

C. Abusing break times

IX. Basic ways of getting along with people

A. Keep skid chains on your tongue; always say less than you think

(NOTE: Develop a low, persuasive voice. How you say something often counts far more than what you say.)

B. Make promises sparingly and keep them faithfully at any cost

C. Never miss a chance to say something kind and encouraging to or about somebody

(NOTE: Praise people for good work done, and if criticism is necessary, criticize constructively.)

D. Be interested in others

(NOTE: Talk to others about their interests, their jobs, their homes, and families. Share others' happiness as well as their sadness. Let those you meet feel that you regard them as persons of importance.)

E. Be cheerful

(NOTE: Keep the corners of your mouth turned up. Hide your pains, worries, and disappointments under a pleasant smile. Laugh at good stories and learn to tell them.)

F. Keep an open mind during all discussions

(NOTE: Discuss but don't argue. It is a mark of intelligence to disagree and yet be friendly.)

G. Let your strengths speak for themselves, and refuse to talk of another's faults.

H. Be careful of others' feelings

(NOTE: Wit and humor at the other fellow's expense are rarely worth the effort, and may cause hurt where it is least expected.)

I. Pay no attention to ill-natured remarks about you

(NOTE: Simply live so nobody will believe them.)

J. Do not be too anxious about getting praise

(NOTE: Do your work, be patient, keep yourself honest, forget self, and you will be respected and rewarded.)

UNIT III

HUMAN RELATIONS

ASSIGNMENT SHEET 2--LEARNING ABOUT CLASS MEMBERS

Directions: This activity will enable you to know the people in your class. You may learn things about them you did not know. You need a partner for this activity. Choose someone you don't know very well. Using the interview data sheet below as a guide, take turns interviewing each other. Write the answers your partner gives to each question. After both data sheets are completed, introduce your partner to the class. Using the notes you wrote during the interview, tell the class about your partner.

INTERVIEW DATA SHEET

Name of interviewer ______________________________

My name ______________________________

A. What is your classification in school? ______________________________

B. Describe some of the things you do at work. ______________________________

____

C. Where do you work? ______________________________

D. What other schools have you attended? ______________________________

____

E. Do you have any brothers or sisters? ______________________________

____

F. Do they work, and if so, where? ______________________________

____

G. What do you do in your spare time? ______________________________

____

H. What is your favorite course here at school? ______________________________

____

I. Do you plan to pursue a career in the building maintenance area after graduation? What field? ______________________________

J. What is the most important thing that happened to you in the past year? ______________________________

____

UNIT III

HUMAN RELATIONS IN THE SHOP

ASSIGNMENT SHEET 3--PERSONALITY RATING SHEET

Directions: Be as sincere as possible and rate yourself by placing a "√" in the blank you think best describes each. Remember, you are rating yourself as you see yourself. After you complete the rating, place a "√" in front of those items receiving the lowest rating. Discuss how each of these can become your strongest points.

	Traits	Very Good	Above Average	Average	Below Average	Poor
1.	Posture	____	____	____	____	____
2.	Expressions	____	____	____	____	____
3.	Health	____	____	____	____	____
4.	Grooming	____	____	____	____	____
5.	Dress	____	____	____	____	____
6.	Mannerisms	____	____	____	____	____
7.	Speech	____	____	____	____	____
8.	Body movements	____	____	____	____	____
9.	Intelligence	____	____	____	____	____
10.	Initiative	____	____	____	____	____
11.	Industry	____	____	____	____	____
12.	Dependability	____	____	____	____	____
13.	Enthusiasm	____	____	____	____	____

	Traits	Very Good	Above Average	Average	Below Average	Poor
14.	Sincere interest in others	____	____	____	____	____
15.	Honesty	____	____	____	____	____
16.	Courtesy	____	____	____	____	____
17.	Manners	____	____	____	____	____
18.	Respect for others	____	____	____	____	____
19.	Emotional control	____	____	____	____	____
20.	Self-confidence	____	____	____	____	____
21.	Moral values	____	____	____	____	____
22.	Loyalty	____	____	____	____	____
23.	Desire to work	____	____	____	____	____
24.	Acceptance of change	____	____	____	____	____
25.	Ability to decide	____	____	____	____	____
26.	Ability to accept criticism	____	____	____	____	____
27.	Tact	____	____	____	____	____
28.	Cheerfulness	____	____	____	____	____
29.	Alertness	____	____	____	____	____
30.	General knowledge	____	____	____	____	____
31.	Willingness to help	____	____	____	____	____
32.	Shows initiative	____	____	____	____	____
33.	Accepts duties	____	____	____	____	____
34.	Expresses other interest	____	____	____	____	____
35.	Maturity	____	____	____	____	____

UNIT III

HUMAN RELATIONS IN THE SHOP

ASSIGNMENT SHEET 4--HUMAN RELATIONS WITH FELLOW STUDENTS AND WORKERS

Directions: Choose the answer you feel is correct for each of the following questions. Place your selection in the blank at the left. Orally discuss those about which you may have any questions.

_____ 1. Many occupations deal primarily with machines, equipment, or paper work; that is, they deal with things. In industry, however, most of the jobs involve close contact with:

a. employers
b. supervisors
c. people
d. other workers

_____ 2. For the most part, people are very much:

a. different
b. alike
c. it is difficult to say

_____ 3. It is possible that the things which you enjoy may:

a. appeal to others
b. not appeal to others
c. be distasteful to others
d. all of the above

_____ 4. Which of the following do most people have in common?

a. right to work at a job of their choice
b. desire to get ahead
c. desire to be accepted and approved
d. all of these
e. none of these

_____ 5. The best way to achieve your goals in life is to follow your rights and desires and:

a. also the wish of your boss
b. what your parents say
c. do unto others as you would have them do unto you
d. do just what you feel like doing

_____ 6. Do the best work you can for the important jobs and:

a. don't worry about the little jobs
b. let others do the little jobs
c. also do the most routine jobs
d. everything else will take care of itself

_____ 7. Plus doing the best work you can, it is important to:

a. learn as much as you can about your company
b. see what you can get on your boss
c. keep up on the latest gossip
d. be seen and not heard

_____ 8. The right to think and act as individuals

a. is not normally shared by most
b. may be normally shared by most
c. is normally shared by most

_____ 9. You should "sell" your abilities on the job by:

a. telling everyone how good you are
b. allowing them to find out by your performance
c. trying to put others down

_____10. Which of the following is not a desirable trait of an employee?

a. sense of humor
b. tact
c. indifference
d. initiative

_____11. Using others for our own benefit is:

a. desirable
b. OK if you can get away with it
c. undesirable
d. not too bad

_____12. When you are criticized by your superior, it is best to:

a. act indifferent
b. tell that person to do it
c. take it constructively
d. shrug it off

_____13. Loyalty includes:

a. working hours only
b. both the time to and from work
c. all the time
d. just when you feel like it

_____14. To approach your job with enthusiasm, it is necessary to:

a. fool the boss
b. impress your co-workers
c. be glad to be part of the team

_____15. It is not necessary to be friendly as long as you:

a. do your job
b. act as though you are
c. get to work on time
d. none of these

_____16. When you have a question, it is best to:

a. do the job the way you think it should be done
b. wait and ask it later
c. not bother your boss with it
d. ask it when it comes up

_____17. When you have joined a clique, you have:

a. picked sides
b. helped yourself
c. joined the "in" group
d. become a member of the team

_____18. A good way to get along in your new job is to:

a. be a "know-it-all"
b. be willing to learn
c. show your co-workers how smart you are
d. run to your boss with every question you have

_____19. Showing that you are not afraid of work means to:

a. work as hard as you can
b. be willing to tackle any job assigned
c. work harder than any of your co-workers

_____20. The need to show appreciation to fellow workers:

a. will get you nowhere
b. is strongest when you are new
c. isn't really necessary at all
d. is just on the surface

_____21. You should start calling your co-workers by their:

a. first names as soon as possible
b. nicknames to show you are really in
c. last names only
d. proper names until you have been around awhile or told differently

_____22. If you do all of the things we have suggested, you will have:

a. everyone liking you
b. a few things
c. a better chance of being well-liked
d. the reputation for being an apple-polisher

_____23. The people you can learn the most from are:

a. always your bosses
b. your best buddies
c. those who show an interest in you
d. the ones with whom you eat lunch

_____24. Human behavior is usually

a. pretty easy to understand
b. not easy to predict
c. easy to predict
d. none of your business

UNIT III

PERSONAL DEVELOPMENT

INFORMATION SHEET 3--ASSUMING RESPONSIBILITY

I. Advantages of handling responsibility.

   A. Pay raises and promotions are more likely to happen when a person shows an ability to handle responsibility.

   B. Relationships with other people are better.

   C. Self-confidence is built.

   D. A person receives a feeling of self-satisfaction.

II. Ways an individual often avoids responsibility.

   A. Making excuses

      1. People do not want an excuse, they just want the work finished.

      2. Continuously making excuses can cause the others to pass a person by when a better opportunity comes along.

      3. Others will quickly point out individuals who make excuses rather than doing their part.

      4. Making excuses can quickly become a habit.

      5. Individuals who complete their work and do their part will never have to make an excuse why something is not finished.

   B. Avoiding others

      1. Individuals often avoid the others so they will not be asked to carry out a responsibility.

      2. Meet new responsibilities head-on by asking questions and doing your best.

      3. Look forward to the boss assigning new responsibilities, because if they are done well it may mean a reward, raise or promotion.

   C. Making little effort to do a good job.

      1. Some individuals will not make their best effort in carrying out a responsibility in hopes that they will not be given another assignment.

      2. More often when a person quickly carries out a responsibility even though it may not be a pleasant one, the individual will be assigned to more important and pleasant responsibilities.

III. Characteristics shown by a responsible person

- A. Loyalty is shown by:
    - 1. Standing up for others
    - 2. Working hard at any assignment to keep the standards high
    - 3. Not talking about others or the assignment unfavorably to others
- B. Dependability is achieved by:
    - 1. Getting to work or school on time
    - 2. Calling in when you will be missing work or school
    - 3. Doing what you say you will
    - 4. Finishing work on time
- C. Honesty is displayed by:
    - 1. Telling the truth
    - 2. Expressing your feelings on a subject and standing by your convictions
    - 3. Admitting your mistakes
    - 4. Being trustworthy
    - 5. Giving an honest day's work

IV. Ways to get ahead on the job

- A. Listen to others

  (NOTE: Do not always be the person talking. A lot can be learned from what others say.)
- B. Contribute to a conversation when the opportunity arises.

  (NOTE: Do not try to control the conversation but do present your thoughts. Others want to know what you have to say and this lets them know you have the ability to think.)
- C. Dress appropriately, but dress nicely

  (NOTE: A better image is seen by others when you do.)
- D. Associate with individuals who think positively

  (NOTE: You will feel better about your job if you do.)
- E. Learn other peoples names

  (NOTE: People appreciate being called by name.)
- F. Assume responsibility and set goals

UNIT III

ASSUMING RESPONSIBILITY

ASSIGNMENT SHEET 5--EXCUSES

Directions: Complete each of the following in order. Be prepared to discuss the answers.

A. List five tasks or jobs you avoid doing by making excuses.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

B. List your five "favorite" excuses.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

C. Select one of the jobs listed above that you avoid doing most by making excuses. How can you use the following to do the job instead of making up an excuse. Write your answers next to the word or statement.

1. Setting a time limit. -

2. Advice or help from others. -

3. Rewarding yourself for finishing the job -

4. Planning -

D. Write two other ideas you feel could help you finish your job without making excuses.

1.

2.

UNIT III

PERSONAL DEVELOPMENT

TEST PART 1

1. Match terms associated with personal care to the correct definition by placing the number of each term in the correct blank.

_____ a. To trim, file, and buff fingernails

_____ b. Lotions which contain some alcohol and are used to clean the face

_____ c. A product that keeps underarms dry and odor-free

_____ d. Bodily reactions to various food fibers, etc.

_____ e. A skin problem common to teenagers

_____ f. Being tired

_____ g. Thin dead skin at the sides and base of a fingernail or toenail

1. Cuticle
2. Acne
3. Antiperspirant
4. Allergies
5. Manicure
6. Fatigue
7. Astringents

2. Select the good grooming habits by circling the letter of each correct answer

a. Bathe weekly

b. Exercise regularly

c. Get sufficient sleep

d. Brush teeth seldom

e. Eat regular meals

f. Shave as often as required

g. Clean and manicure nails

h. Do not brush hair

i. Use deodorant or antiperspirant

j. Shampoo hair as needed

k. Wear extreme clothing styles

l. Practice good posture

3. Point out the things to consider when selecting clothing by circling the letter of each correct answer.
   a. Clothing should be practical and easy to care for
   b. Fit and comfort
   c. Wild styles
   d. One's personality
   e. Body shape
   f. Most expensive items
   g. First impression of item
   h. Fabric type and upkeep
   i. Color line and style
   j. Life expectancy of item
   k. Is it different from other clothing?
   l. Is the clothing safe to wear for work?
   m. Is the clothing clean, well-fitting, and suitable for work?

4. Point out the types of foods and recommended daily servings for each of the basic food groups. Choose the correct answers from the list below. Use the same answer as many times as necessary.

Foods Choice	Servings Choice
Cheese and other dairy products	One serving
Beef, fish, and poultry	Two servings
Beans, tomatoes, and oranges	Three servings
Grain products	Four servings

Food		Serving
a. Vegetables and fruits	-	-
b. Meats	-	-
c. Breads and cereals	-	-
d. Milk	-	-

5. Point out the proper sleeping habits by placing a "✓" in front of each correct answer below.

_____a. Exercise daily
_____b. Eat plenty of food late in the evening
_____c. Go to bed at different times each night
_____d. Plan an exciting evening before bedtime
_____e. Avoid worrying when getting to bed
_____f. Make sure you get plenty of rest
_____g. Wear comfortable sleepwear
_____h. Make sure the room is well ventilated
_____i. Leave the room light on and the door open

UNIT III

HUMAN RELATIONS IN THE SHOP

TEST PART 2

1. Match the terms associated with human relations to the correct definitions by placing the number of each term in the blanks provided.

_____ a.	Getting along with people and learning to accept them as they are.	1. Personality
_____ b.	All of a person's traits that are noticeable in an individual's behavior.	2. Service
_____ c.	Determines what one does and affects one's manner of behavior.	3. Human relations
_____ d.	Giving consideration to people and their thoughts	4. Respect
_____ e.	Giving of one's self, talent, and abilities.	5. Attitude
_____ f.	A quality or characteristic of an individual.	6. Trait

2. Point out the reasons to study personalities by answering yes or no to each of the following statements.

_____ a. to understand ourselves

_____ b. to kill time

_____ c. To point out a person's bad traits

_____ d. To understand others

_____ e. To better live in our society

_____ f. To improve our personalities

3. Choose the correct order of steps for improving your personality. Number the correct order with 1 through 5.

_____ a. Study this rating trait by trait.

_____ b. Decide that your personality can be improved.

_____ c. Carry out your plan of action.

_____ d. Find out how your personality rates.

_____ e. Develop a plan of action.

4. Select the characteristics of a good personality by placing a "✓" in the blank next to good characteristics.

_____ a. Cheerfulness

_____ b. Spitefulness

_____ c. Self-confidence

_____ d. Tactfulness

_____ e. Conceited

_____ f. Forcefulness

5. Select the characteristics of a good fellow worker by placing a "✓" in the correct blanks.

_____ a. Carries out assigned responsibilities

_____ b. Criticizes company policy

_____ c. Does only the work assigned

_____ d. Contributes new ideas

_____ e. Follows business rules and policies

_____ f. Respects authority

_____ g. Is critical of new ideas

6. Point out the personality traits that should be avoided by placing a "✓" in the correct blanks:

_____ a. Passing the buck

_____ b. Dedication

_____ c. Loyalty

_____ d. Gossiping

_____ e. Apple-polishing

7. Select the reasons why people work by placing a "✓" in the correct blanks.

_____ a. For personal satisfaction

_____ b. To support a family

_____ c. To achieve goals

_____ d. To get out of the house

_____ e. For acceptance of peers

_____ f. For power

_____ g. To decrease welfare rolls

_____ h. For wealth

8. Point out the reasons why most employees lose their jobs by answering true or false to each of the following statements.

_____ a. Working too hard

_____ b. Unable to get along with fellow workers

_____ c. Poor attendance and too often late to work

_____ d. Trying to advance

_____ e. Abusing break times

9. List three ways people are different

a.

b.

c.

10. Select the basic ways of getting along with people by placing a "✓" in the correct blanks

_____ a. Be cheerful

_____ b. Complain often

_____ c. Talk about co-workers behind their back

_____ d. Keep an open mind during all discussions

_____ e. Be careful of others' feelings

_____ f. Voice your opinions often

_____ g. Tell others of your strengths and point out their faults

_____ h. Be interested in others

_____ i. Keep only the promises that are easily kept

UNIT III

PERSONAL DEVELOPMENT

TEST PART 3

1. Point out the advantages of handling responsibility by placing a "✓" in front of each listed below.

_____ a. Pay raises and promotions are more likely

_____ b. Vacation time will be doubled

_____ c. A person will likely get fired

_____ d. Relationships with other people are better

_____ e. A person receives a feeling of self-satisfaction

_____ f. A person will have to work longer

_____ g. Self-confidence is built

2. Identify the ways which an individual uses to avoid responsibility. Choose the correct word or words to complete the sentences.

a. Making excuses can become ____________________________.

1. good 2. fun 3. a habit

b. Many times people begin to _______________ their own excuses.

1. like 2. believe 3. make up

c. People who always make excuses are usually _____________ with themselves.

1. in love 2. unhappy 3. in trouble

d. Making excuses may be your way of avoiding _________________.

1. failure 2. hard work 3. playtime

e. Constantly making excuses on the job can cause an employer to avoid giving you ____________________________.

1. a lot of trouble 2. an extra bonus 3. a better job

f. Bosses get fed up with excuses when they expect to see work ______________.

1. ruined 2. finished 3. burned up

g. Not making excuses can lead to ______________________.

1. firing 2. bad trouble 3. pay raises

3. Identify the characteristics of a responsible person. Put an "L" in the blank if the statement refers to loyalty, put a "D" if it refers to dependability, and an "H" if it refers to honesty.

   a. _____ Getting to work on time.

   b. _____ Being fully trustworthy.

   c. _____ Standing up for friends and employer.

   d. _____ Admitting mistakes.

   e. _____ Calling in when work must be missed.

   f. _____ Giving an honest day's work.

   g. _____ Working hard and not talking to others about the company for which one works.

   h. _____ Doing what one promises to do.

4. Select the ways to get ahead on the job by answering "True" or "False" to each statement below.

   _____ a. Try to do the most talking so others will know you have a lot to say.

   _____ b. When others are talking, do not put in your thoughts when the occasion arises.

   _____ c. Dress appropriately and nicely.

   _____ d. Associate with individuals who think positively.

   _____ e. Learn other peoples names and call them by their name.

   _____ f. Assume responsibility and set goals.

UNIT III

PERSONAL DEVELOPMENT

ANSWERS TO TEST

Part 1

1. a. 5
   b. 7
   c. 3
   d. 4
   e. 2
   f. 6
   g. 1

2. b.
   c.
   e.
   f.
   g.
   i.
   j.
   l.

3. a.
   b.
   d.
   e.
   h.
   i.
   j.
   l.
   m.

4. a. Beans, tomatoes, and oranges - four
   b. Beef, fish, poultry - two or more
   c. Grain products - four
   d. Cheese and other dairy products - four

5. a.
   e.
   f.
   g.
   h.

Part 2

1. a. 3
   b. 1
   c. 2
   d. 1
   e. 3
   f. 1
   g. 2

2. a. yes
b. no
c. no
d. yes
e. yes
f. yes

3. a. 3
b. 5
c. 5
d. 2
e. 4

4. a
c
d
e

5. a
d
e
f

6. a
d
e

7. a
b
c
e
f
h

8. a. False
b. True
c. True
d. False
e. True

9. a. Backgrounds
b. Attitudes
c. Abilities

10. a
d
e
h

Part 3

1. a
d
e
g

2. a. 3. a habit
b. 2. believe
c. 2. unhappy
d. 1. failure
e. 3. a better job
f. 2. finished
g. 3. pay raise

3. a. D
b. H
c. L
d. H
e. D
f. L
g. L
h. D

4. a. False
b. False
c. True
d. True
e. True
f. True

UNIT IV

JOB APPLICATION AND INTERVIEW

UNIT OBJECTIVE

After completing this unit of instruction, the student will be able to identify terms, definitions, and procedures involved in job applications and interviews. The student will also prepare a résumé, write a letter of application for employment, complete an employment application form, and in role-playing situations demonstrate the ability to call for an interview appointment and participate in an interview. This knowledge will be evidenced by demonstration and by satisfactorily completing a unit test.

SPECIFIC OBJECTIVES

After completing this unit of instruction, the student will be able to:

1. Identify terms relating to job application and interview with their correct definitions.
2. Point out items of information to be included on a résumé.
3. List the two methods of applying for a job.
4. Identify examples of proper dress and grooming for an interview.
5. Select the correct ways to prepare for an interview.
6. Point out the proper conduct during an interview.
7. Select the positive attitudes an employer looks for during an interview.
8. Name the reasons one may not get a job after an interview.
9. Demonstrate the ability to:
    a. Write a letter of application for employment.
    b. Role-play, making an interview appointment by phone.
    c. Prepare and write a résumé.
    d. Answer questions an employer may ask during an interview.
    e. Complete an employment application form.
    f. Point out the do's and don'ts of an interview.
    g. Participate in and evaluate a role-played job interview.
    h. Write a follow-up letter.

UNIT IV

JOB APPLICATION AND INTERVIEW

SUGGESTED TEACHING ACTIVITIES

I. Objective sheet

   A. Discuss unit objectives with students

   B. Discuss each specific objective with students

   C. Have the students complete the objectives in the most logical sequence for the shop organization.

   D. Add any necessary objectives.

II. Information and assignment sheets

   (NOTE: This unit may be more appropriate for teaching close to the end of the year.)

   A. INFORMATION SHEET 1--PREPARING FOR THE APPLICATION

      1. Provide local sources of job opportunity notices.

         (Transparency 1--HOW TO FIND A JOB)

      2. Discuss local requirements in applying for a job.

      3. Have the students to complete the following assignment sheets to reinforce this area of information.

         a. ASSIGNMENT SHEET 1--WRITING A LETTER OF APPLICATION FOR EMPLOYMENT

            (1) Have students write sample letters to shops of their choice.

            (2) Discuss what should and should not be included in the letters.

         b. ASSIGNMENT SHEET 2--MAKING AN APPOINTMENT BY PHONE

            (1) The students in class may check each student's handling of the simulated situation.

            (2) Have several students role-play the simulated situation to provide a variety of questions.

         c. ASSIGNMENT SHEET 3--PREPARING AND WRITING A RÉSUMÉ

            (1) Assist the students with key information for résumé.

(2) Have the business or office occupations classes type the résumé for the students' notebooks.

(3) Encourage students to update their résumés as they work in different places.

B. INFORMATION SHEET 2--THE INTERVIEW

1. Discuss the types of clothes that would be appropriate for various local industries.

2. Have a personnel manager from local industry come and talk to the class.

3. Have the students to complete the following assignment sheets to reinforce this area of information.

a. ASSIGNMENT SHEET 4--QUESTIONS THE EMPLOYER MAY ASK

(1) This activity may be given orally to the class.

(2) Have the class brainstorm other questions that they may be asked.

b. ASSIGNMENT SHEET 5--COMPLETING AN EMPLOYMENT APPLICATION FORM

(1) Application forms from the VOCT Competitive Activities Guide may be used.

(2) Provide examples of other application forms from local businesses.

c. ASSIGNMENT SHEET 6--THE DO'S AND DON'TS OF THE INTERVIEW

(1) Add any other important rules relating to the interview.

(2) Discuss the reasons for each answer.

d. ASSIGNMENT SHEET 7--EVALUATING THE JOB INTERVIEW

(1) Have the class evaluate the student in the interview.

(2) Have several students participate in the activity.

e. ASSIGNMENT SHEET 8--WRITING A FOLLOW-UP LETTER

(1) Assist the students in preparing a sample follow-up letter.

(2) Discuss the importance of such a letter and its content.

III. Transparency masters

(NOTE: Transparency masters are included in student manuals and may be used as information sheets.)

A. TM-1--HOW TO FIND A JOB

B. TM-2--HOW TO GET A JOB APPLICATION FORM

IV. Answers to assignment sheets

A. Some answers will vary, but a discussion is more important than looking for specific answers.

B. Have students make corrections and place the assignments in their notebooks for later reference.

V. Evaluation

A. The test is divided into two parts.

(NOTE: Each part covers one information sheet)

B. Various approaches may be used in testing

1. Give each part of the test after the student has completed studying the information on one information sheet.

2. Give the entire test upon completion of all the information sheets in a unit.

3. Give one or more parts of the test as an additional assignment or to reinforce problem areas of learning.

C. Include evaluation parts corresponding to any information sheets added to the unit.

VI. Answers to the test

A. Answers are based on the total information covered in the unit.

B. For convenience in grading, make corresponding answer sheets for any test questions added.

VII. References

A. Andrew, Margaret E. The Job You Want. Dallas: Gregg Division, McGraw-Hill Book Company, 1968.

B. Blackledge, Walter L., Ethel H. Blackledge and Helen J. Keily. The Job You Want--How To Get It. 2nd ed. Cincinnati: South-Western Publishing Company, 1975.

C. Kushner, John A. and Helen J. Keily. How to Find and Apply for a Job. 3rd ed. Cincinnati: South-Western Publishing Company, 1975.

UNIT IV

JOB APPLICATION AND INTERVIEW

INFORMATION SHEET 1--PREPARING FOR THE APPLICATION

I. Application Terms

A. Applicant--The person applying for a job.

B. Interviewer--The person who interviews the applicant.

C. Personal data information sheet--A written list of important information about the applicant.

(NOTE: Also called résumé or vita sheet.)

D. Reference--Person, usually not a relative, who can give information about the applicant.

E. Marital status--Is the applicant single, married or divorced?

F. Extracurricular activities--What the applicant does for fun when not working.

G. Fringe benefits--The "extras" provided by an employer, such as paid vacations, sick leave, and insurance protection.

H. Qualifications--The training, schooling, and experience needed by an applicant for a job.

I. Vocational preparation--Skills in a vocational area gained while going to school or working.

II. Writing a résumé

(NOTE: This is a written list of a person's experience and training which is given to the interviewer or manager of a company.)

A. Standards

1. Written in correct order.
2. Neatly written or typed.
3. Free from spelling errors.
4. Presented in an outline form.
5. Limited to one page.
6. Tells the truth about ability and experience.

B. Information to be included

  1. Name, address, phone number.
  2. Type of job being sought.
  3. Small picture of self.
  4. Personal information.
     a. Age, weight, height.
     b. Health.
     c. Date of birth.
     d. Marital status.
     e. Social Security Number.
  5. Educational information
     a. Name and address of schools attended.
     b. Dates you attended each school.
     c. Subjects studied.
     d. Awards and out of class activities.
  6. Work experience
     a. Name and address of company or companies where you have worked.
     b. How long you worked there.
     c. Briefly tell what you did in that job or jobs.
  7. Tell about any special skills.
  8. References--Be sure to get permission from person(s) before using name as a reference.

III. Applying for a job

A. Writing a letter of application

  1. Use letter style you wish.
  2. Arrange neatly.
  3. Give information in a clear order.
  4. Be sure what you say can be easily understood.

5. Be brief and to the point.
6. Write in a positive tone.
7. Have letter free from erasures and paper clean.
8. Be sure you haven't made any errors.
9. Include the following information:
    a. How you found out about the job opening.
    b. Job wanted.
    c. Reason for interest in job.
    d. Reason why you think you can do the job.
    e. Where your résumé can be found.
    f. Skills you can perform.
    g. Ask for more information about job.
    h. Include your address and telephone number.

B. Applying by telephone

1. Give your name.
2. Ask if the job has been filled.
3. Find out exactly what the job requires.
4. Ask for an application form.
5. Ask for an appointment for an interview.
6. Mention your résumé, if you have one.
7. Give your address and telephone number.

UNIT IV

JOB APPLICATION AND INTERVIEW

INFORMATION SHEET 2--THE INTERVIEW

I. Proper dress and grooming for an interview

(NOTE: Find out how the employees dress for the job because you should dress better than you would dress for the job when you interview.)

- A. Body clean and odor-free.
- B. Freshly shaven.
- C. Hair neat, clean, and trimmed.
- D. Hands and nails clean and trimmed.
- E. Makeup freshly-applied.
- F. Teeth brushed.
- G. Mouthwash used.
- H. Clothing clean and pressed.
- I. Conservative clothing style.
- J. Hosiery free of runs.
- K. Socks match clothes.
- L. Shoes clean and polished.

II. Steps in preparing for an interview

- A. Call or write for an appointment.
- B. Know about the job for which you are applying.
- C. Learn about the company.
- D. If possible, find out the name of the interviewer.
- E. Review personal qualifications.
- F. Think through possible questions interviewer might ask, such as:
    - 1. Why you want to work for this particular company.
    - 2. Why you left a previous job.

    3. What courses you enjoyed in school.
    4. How you spend your spare time.
    5. Your out-of-school activities.
    6. Your vocational goals.
    7. Your grades in school.
    8. The salary you expect.

G. Prepare questions to ask about the company

    1. Is the job permanent?
    2. What type of advancement is there in the company?
    3. What are the fringe benefits?
    4. What kind of salary increases are included?
    5. When can you find out whether or not you were hired?

H. Prepare a card with the following types of information that may be needed on the application form.

    1. Dates required on forms.
    2. Correct spelling of difficult words.
    3. Names, addresses, and phone numbers of persons used as references.

III. Proper conduct during an interview

A. Greet interviewer with a friendly smile.

B. Call interviewer by name.

C. Introduce self.

D. Shake hands firmly with interviewer.

E. Sit in a chair only after the interviewer asks you.

F. Avoid slouching in the chair.

G. Allow the interviewer to lead the conversation.

H. Be polite during the interview.

I. Avoid interrupting the interviewer.

J. Keep résumé and examples of work ready.

K. Give your answers clearly.

  1. Think about what to say before answering.

  2. Use correct grammar.

  3. Avoid slang.

  4. Keep eye contact with the interviewer.

L. Be sincere and enthusiastic.

M. Avoid annoying things like:

  1. Smoking or chewing gum.

  2. Squirming in chair.

  3. Crossing legs.

  4. Tapping fingers.

N. Answer questions honestly about self.

O. Watch for any signs the interviewer is through talking to you.

P. Thank the interviewer for the time allowed.

Q. Leave at once when the interview is over.

IV. Things employer looks for in you during an interview

A. Enthusiasm and interest.

B. A sense of company loyalty.

C. Sincerity.

D. Alertness and quickness of mind.

E. Honesty.

F. Desire to work.

G. Desire to improve oneself.

V. Reasons for not getting a job after an interview

A. Poor grooming habits.

B. Poorly displayed personality.

  1. Chip on shoulder.

  2. Improper attitude toward work.
  3. Overly emotional.
  4. Spoke in a negative manner about former jobs and people you worked for.

C. Late for interview.

D. Application form filled out improperly.

  1. Did not follow directions.
  2. Did not answer all questions.
  3. Did not write legibly.
  4. Gave incorrect information.

E. Poor school grades, records, and too many absences and tardies.

UNIT IV

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 1--WRITING A LETTER OF APPLICATION FOR EMPLOYMENT

Directions: Write a letter of application to a possible employer, using your own choice of letter style. Use the sample letter on the next page as a guide when writing the letter.

SAMPLE LETTER OF APPLICATION

444 West Washington
Anywhere, Texas 77777
January 15, 1977

Mr. James Zimmerman
Personnel Manager
La-Nad Corporation
222 Finale Street
Anywhere, Texas 77777

Dear Mr. Zimmerman:

Please consider me for the maintenance helper position which your company advertised in the Gazette.

The skills I've learned in my Building Maintenance classes qualify me for the position. I have worked with many different construction hand and power tools. I understand the safety involved working around construction power tools. Our Building Maintenance class has worked in the shop in an organized and safe manner. This has given me a broad understanding of construction and repair processes. A more complete description of my qualifications is provided on my enclosed résumé.

May I come for an interview at your convenience? I can be reached by telephone at 555-4444 or by mail at 444 West Washington, Anywhere, Texas 77777.

Sincerely,

John Johnson

Enclosure

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 2--MAKING AN APPOINTMENT BY PHONE

Directions: Using a simulated telephone situation, role play an applicant interested in a particular job opening with the instructor role-playing the employer's receptionist. After completing the telephone conversation, complete the checklist below. If you answer "no" to any question, your conversation was not up to par and could hinder you from getting the job.

CHECKLIST	YES	NO
1. Were prepared before calling		
2. Did not stutter and stammer to find the right words		
3. Identified yourself immediately		
4. Relayed your purpose for calling immediately		
5. Inquired as to the best time for the interviewer to see you		
6. Were courteous and friendly		
7. Thanked the receptionist		
8. Recorded the interview date, hour, and location		

UNIT IV

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 3--PREPARING AND WRITING A RÉSUMÉ

Directions: Write a résumé to include with your letter of application. Select the style of your choice or use the example on the next page as a guide.

SAMPLE VITA
RÉSUMÉ
PERSONAL DATA SHEET

NAME : John Johnson

ADDRESS : 324 Winding Way
Jardin, Texas 75428

TELEPHONE : 556-5433

EDUCATION : Senior at Jardin High School (Will graduate in May)

AGE : 17

HEALTH : Excellent

WEIGHT : 135

MARITAL STATUS : Single

HEIGHT : 5'10"

DATE OF BIRTH : 3-15-60

SUBJECTS STUDIED:

Science
Mathematics
English
Social Studies
Building Maintenance

STUDENT ACTIVITIES:

Vice President, Vocational Opportunities Club of Texas
Member of Inter-act Club

SPECIAL SKILLS:

Can operate power equipment such as a tablesaw, router, drill press, radial arm saw, shaper, jigsaw, and others.
Have used all woodworking hand tools for layout, measurement, fabrication, and assembly.
Have completed numerous projects and assignments
Have worked in all areas of building maintenance such as carpentry, masonry, electrical, painting, plumbing, pest control, and glazing.

WORK EXPERIENCE:

Worked on numerous group and individual projects and worked part-time including summers for Colonial Apartments. During my employment, I performed both interior and exterior repair and maintenance.

REFERENCES:

Mr. Joseph Waltzer/
Building Maintenance Instructor
Jardin High School
Jardin, Texas 75428

Mr. J. C. Fryers
Owner, Colonial Apartments
564 W. 31st
Rollingstone, Texas 70000

UNIT IV

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 4--QUESTIONS THE EMPLOYER MAY ASK

Directions: In a job interview, it is your responsibility to "sell" yourself. You must be prepared to answer any questions asked in a manner that will leave a favorable impression. Select any 10 questions contained on the next sheet and write the question number and your answers to those questions in the space provided.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

QUESTIONS FREQUENTLY ASKED DURING THE EMPLOYMENT INTERVIEW

1. What are your future plans?
2. In what school activities have you participated? Which did you enjoy most?
3. How do you spend your spare time? What are your hobbies?
4. In what type of position are you most interested?
5. Why do you think you might like to work for our company?
6. What jobs have you held? How were you obtained and why did you leave?
7. What courses did you like best? Least? Why?
8. Why did you choose your particular field of work?
9. How did you spend your vacations while in school?
10. What do you know about our company?
11. Do you feel that you have received a good general training?
12. What can you do that makes you feel that you will be successful in your field?
13. In what out of school activities have you participated?
14. What are your ideas on salary?
15. How do you feel about your family?
16. How interested are you in sports?
17. Do you prefer to live in a certain town?
18. What are your other work related interests?
19. How much money do you hope to earn at age 30? 35?
20. Why did you decide to go to this particular school?
21. Do you think that your extracurricular activities were worth the time you devoted to them?
22. What do you think helps a person get promotions in a good company?
23. What personal characteristics are necessary for success in your chosen field?

24. Why do you think you would like this particular type of job?
25. What are your parents' occupations?
26. Tell me about your home life during the time you were growing up.
27. Do you like to work with others or by yourself?
28. What kind of boss do you prefer?
29. Are you just interested in making money, or do you really like to help other people, too?
30. Can you take instructions without feeling upset?
31. Do you live with your parents? What person has had the greatest influence on you?
32. How did previous employers treat you?
33. What have you learned from some of the jobs you have had?
34. Can you get recommendations from previous employers?
35. What interests you about our product or service?
36. Do you feel you have done the best work you could in your classes?
37. What do you know about opportunities in the field which you were trained?
38. Have you ever had any trouble in getting along with fellow students and teachers?
39. How do you get your spending money?
40. Have you saved any money?
41. Do you like routine work?
42. Do you like regular hours?
43. What size city do you prefer?
44. What is your major weakness?

UNIT IV

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 5--COMPLETING AN EMPLOYMENT APPLICATION FORM

Directions: Complete the application form on the following pages and use the following rules:

A. Scan the entire application form before you begin.

B. Follow the instructions on the form exactly.

C. Write legibly.

D. Use ink when writing on an application form unless you are told to use pencil.

E. Write all facts needed, but be brief.

F. Fill in all the blanks.

1. Write "N/A" or "not applicable" for questions that don't apply to you.
2. If there is no answer, write "none".

G. Know complete addresses, titles, and phone numbers of references and former employers.

H. When finished, read what you have written to be sure it is correct.

APPLICATION FOR EMPLOYMENT

PERSONAL INFORMATION

Date Social Security Number

Name Age Sex

Last First Middle

Present Address

Street City State

Permanent Address

Street City State

Phone No. Own Home Rent Board

Date of birth Height Weight Color of Hair Color of Eyes

Married Single Widowed Divorced Separated

Number of children Dependents other than wife or children Citizen of U.S.A. Yes ☐ No ☐

If related to anyone in our employ, state name and department Referred by

EMPLOYMENT DESIRED

Position Date you can start Salary desired

Are you employed now? If so may we inquire of your present employer

Ever applied to this company before? Where When

EDUCATION	Name and Location of School	Years Attended	Date Graduated	Subjects Studied
Grammar School				
High School				
College				
Trade, Business or Correspondence School				

Subjects of special study or research work

What foreign languages do you speak fluently? Read Write

U.S. Military or Naval service Rank Present membership in National Guard or Reserves

Activities other than religious (civic, athletic, fraternal, etc.)

Exclude organizations the name or character of which indicates the race, creed, color or national origin of its members

Last

First

Middle

ASSIGNMENT

FORMER EMPLOYERS

List below last four employers, starting with last one first

Date Month and Year	Name and Address of Employer	Salary	Position	Reason for Leaving
From To				
From To				
From To				
From To				

REFERENCES:

Give below the names of three persons not related to you, whom you have known at least one year.

	Name	Address	Business	Years Acquainted
1				
2				
3				

PHYSICAL RECORD:

List any physical defects

Were you ever injured? Give details

Have you any defects in hearing? In vision? In speech?

In case of emergency notify

Name Address Phone No.

I authorize investigation of all statements contained in this application. I understand that misrepresentation or omission of facts called for is cause for dismissal. Further, I understand and agree that my employment is for no definite period and may, regardless of the date of payment of my wages and salary, be terminated at any time without any previous notice.

Date Signature

DO NOT WRITE BELOW THIS LINE

Interviewed By Date

REMARKS:

Neatness Character

Personality Ability

Hired For Dept. Position Will Report Salary Wages

Approved: 1 2. 3.

Employment Manager Dept. Head General Manager

UNIT IV

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 6--THE DO's and DON'Ts of the INTERVIEW

Directions: Point out the correct things to do during an interview by writing Do or Don't in each of the blocks on the left.

______ 1. Stress your qualifications for the job opening.

______ 2. Give experiences you have had which would fit you for the job.

______ 3. Keep stressing your need for the job.

______ 4. Apologize for your age.

______ 5. Talk and think, as much as possible, about the future rather than the past.

______ 6. Be overconfident.

______ 7. Beg to be considered.

______ 8. Show, where possible, your ability to keep a job, your good attendance records, and safety experience.

______ 9. Discuss past experience which has no relation to the job for which you are applying.

______10. Remember that older persons, too, are capable, dependable, trainable, careful, and steady on a job.

______11. Try to learn before the interview about the company and its products.

______12. Speak with a muffled voice.

______13. Try to make the interviewer think you can do everything.

______14. Give the "right" answer, even if it is untrue.

______15. Speak with confidence.

______16. Approach the employer with respect and dignity.

______17. Have a positive attitude.

______18. Maintain poise and self-control.

______19. Give your ideas on pay and working hours early in the interview.

_____20. Arrive late and out of breath for the interview.

_____21. Keep poise and self-control.

_____22. Hesitate to fill out an application or give references.

_____23. Try to overcome nervousness.

_____24. Go to the interview without a record of your former jobs.

_____25. Stress the contribution you can make to the business.

_____26. Apply for a certain job.

_____27. Know what you can, and cannot, do.

_____28. Answer questions honestly and openly.

_____29. Hold yourself erect.

_____30. Be well-groomed and correctly dressed.

_____31. Do not mention the contacts who told you about the job.

_____32. Show you are willing to learn.

_____33. Know the importance of getting along with people.

_____34. Feel that the world owes you a living.

_____35. Make claims that you can't deliver.

_____36. Ask the interviewer of any possible job openings in the future if there are not any at the time.

_____37. Be a "know it all".

_____38. Have ready a list of any former employers.

_____39. Act as if you feel that you are less important than others.

_____40. Hang around to keep the interview going as long as possible.

UNIT IV

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 7--EVALUATING THE JOB INTERVIEW

Directions: In a role-playing situation, you will participate in a job interview with your instructor acting out the part of the interviewer. Prepare yourself as you would for an actual job interview. After completing the job interview, evaluate the interview situation according to the following checklist by placing a "✓" in the appropriate column.

APPEARANCE	YES	NO
1. Clothing clean and well pressed?		
2. Clothing conservative in style?		
3. Body clean and odor free?		
4. Hair trimmed, clean, and combed?		
5. Shoes polished?		
BEHAVIOR		
1. Greeted interviewer with a smile?		
2. Called the interviewer by name?		
3. Introduced self?		
4. Shook interviewer's hand?		
5. Sat only when asked to do so?		
6. Kept eye contact with interviewer?		
7. Listened carefully to what interviewer said?		
8. Thought questions out before answering?		
9. Spoke well of previous employers and associates?		
10. Showed desire to work?		
11. Were open to new ideas?		
12. Were enthusiastic about school, work, and life in general?		

	YES	No
13. Asked questions about the job and the company?		
14. Were prepared to tell how you could benefit the company?		
15. Were honest in telling your qualifications and experiences?		
16. Did not chew gum, smoke, or eat candy?		
17. Answered questions briefly and to the point?		
18. Were on time for the interview?		
19. Thanked the interviewer for his/her time?		
20. Left promptly?		

If you answered "NO" to any of the above questions, your chances for getting the job are reduced.

UNIT IV

JOB APPLICATION AND INTERVIEW

ASSIGNMENT SHEET 8--WRITING A FOLLOW-UP LETTER

Directions: Write a follow-up letter to thank an employer for an interview. Select a format of your own or follow the format on the next page. Be sure that the letter is neatly written or typed without errors. Express your appreciation for the time spent for the interview. Provide a brief statement of your qualifications and your interest for the job. Give your name, address, and telephone number.

321 S. Main
Jordin, Texas 75428
February 1, 1980

Mr. Bob Jones
Personnel Manager
3-H Enterprises
120 Industrial Blvd.
New City, Texas 77000

Dear Mr. Jones:

Thank you for the time you took for the interview with me in regard to the building maintenance position with your company. I feel that working for 3-H Enterprises would be most interesting and that I could easily perform the tasks that the job requires. I hope to have the opportunity to prove my skills in this job.

I would be available to begin work June 1st. You may call me at home after 5 p.m. at 456-6543.

Sincerely

Bennye Johnson

UNIT IV

JOB APPLICATION AND INTERVIEW

ANSWERS TO ASSIGNMENT SHEETS

Assignments 1 through 5

Evaluated to the satisfaction of the instructor.

Assignment 6

1. Do
2. Do
3. Don't
4. Don't
5. Do
6. Don't
7. Don't
8. Do
9. Don't
10. Do
11. Do
12. Don't
13. Don't
14. Don't
15. Do
16. Do
17. Do
18. Do
19. Don't
20. Don't
21. Do
22. Don't
23. Do
24. Don't
25. Do
26. Do
27. Do
28. Do
29. Do
30. Do
31. Don't
32. Do
33. Do
34. Don't
35. Don't
36. Do
37. Do
38. Do
39. Don't
40. Don't

Assignments 7 and 8

Evaluated to the satisfaction of the instructor.

UNIT IV

JOB APPLICATION AND INTERVIEW

TEST PART 1

1. Match the following terms with their correct definitions.

_____ a. applicant

_____ b. personal data information sheet

_____ c. reference

_____ d. marital status

_____ e. extracurricular activities

_____ f. fringe benefits

_____ g. qualifications

_____ h. vocational preparation

_____ i. interviewer

1. The "extras" provided by an employer
2. Tells whether the applicant is single, married, or divorced
3. Person, usually not a relative, who can give information about the applicant
4. Person who interviews the applicant
5. The person applying for a job
6. The training, schooling, and experience needed by an applicant for a job
7. Skills in a vocational area gained while going to school or working
8. Written list of information about applicant
9. Tells what an applicant does for fun

2. Point out the items of information to be included on a résumé by placing a "✓" in the correct blanks below.

_____ a. Name, address, and phone number

_____ b. Salary

_____ c. Type of employment being sought

_____ d. Work experience

_____ e. Grades made in school

_____ f. Subjects studied in school

_____ g. Parents' occupations

_____ h. References

3. List the two methods of applying for a job.

1.

2.

UNIT IV

JOB APPLICATION AND INTERVIEW

TEST PART 2

1. Circle the letter in front of each of the following which are examples of proper dress and grooming for an interview.

   a. Blue jeans and T-shirts

   b. White socks with a black suit

   c. Teeth brushed

   d. Mouthwash used

   e. Shoes cleaned and polished

   f. Hands and nails cleaned and trimmed

   g. Socks or hosiery with holes showing

   h. Wrinkled shirt

   i. Body clean and odor free

   j. Deodorant that was applied the day before

2. Select the correct ways to prepare for an interview by answering true or false to each of the following statements.

   _____ a. An appointment for an interview is not necessary.

   _____ b. Know about the job for which you are applying.

   _____ c. Learn about the company before you interview.

   _____ d. You do not need to know the name of the interviewer.

   _____ e. Review your personal qualifications.

   _____ f. Wait until asked to answer the interviewer's questions.

   _____ g. Do not make the interview too long by asking questions.

   _____ h. Interview in your work clothes so they will think you are a hard worker.

   _____ i. Do not prepare notes on things to remember because they will think you have a short memory.

   _____ j. Plan to arrive late so the interviewer will think you stay busy.

3. Place a "✓" beside those statements which are proper conduct during an interview.

______ a. Never smile during an interview.

______ b. Always call the interviewer by first name.

______ c. Introduce self.

______ d. Shake hands with the interviewer softly.

______ e. Sit in a chair only after the interviewer asks you to.

______ f. Sit straight, but comfortable.

______ g. Try to keep the lead during the conversation.

______ h. Remain polite during the interview.

______ i. Interrupt the interviewer anytime a question enters your mind.

______ j. Keep a résumé and examples of your work handy.

______ k. Express ideas and views clearly.

______ l. Show sincerity.

______ m. Smoke during the interview, if desired.

______ n. Answer questions honestly.

______ o. Look for signs to indicate the interview is over.

______ p. Thank the interviewer for the time allowed and leave promptly.

4. Select the positive attitudes an employer looks for during an interview by placing a "✓" in front of each.

______ a. Enthusiasm and interest

______ b. A sense of dedication

______ c. Know-it-all

______ d. Sincerity

______ e. alertness

______ f. Dishonesty

______ g. Desire to get the easiest job

______ h. Desire to improve oneself

5. List five reasons one may not get a job after an interview.

a.

b.

c.

d.

e.

UNIT IV

JOB APPLICATION AND INTERVIEW

ANSWERS TO TEST

PART--1

1. a. 5
   b. 8
   c. 3
   d. 2
   e. 9
   f. 1
   g. 6
   h. 7
   i. 4
2. a. ✓
   b.
   c. ✓
   d. ✓
   e.
   f. ✓
   g.
   h. ✓
3. a. Write a letter of application
   b. Apply by telephone

PART 2

1. c.
   d.
   e.
   f.
   i.

2. a. false
   b. true
   c. true
   d. false
   e. true
   f. false
   g. false
   h. false
   i. false
   j. false

3. a.
   b.
   c. ✓
   d.
   e. ✓
   f. ✓
   g.
   h. ✓
   i.
   j. ✓
   k. ✓
   l. ✓
   m.
   n. ✓
   o. ✓
   p. ✓

4. a. ✓
   b. ✓
   c.
   d. ✓
   e. ✓
   f.
   g.
   h. ✓

5. Answer should include:
   a. Poor grooming habits
   b. Poor personality
   c. Late for interview
   d. Application filled out improperly
   e. Poor school grades, records, and excessive absences and tardies

UNIT V

GENERAL SAFETY

UNIT OBJECTIVE

After completing this unit, the student will be able to define safety, state the individual, group, and general safety rules, and apply these to situations in the shop This knowledge will be evidenced through demonstration and by scoring 100% on a unit test.

SPECIFIC OBJECTIVES

After completing this unit, the student will be able to:

1. Explain safety as it applies to an individual.
2. Point out the importance of good safety attitudes.
3. Point out the ways you can practice personal safety.
4. Select the correct safety rules to be followed in the shop.
5. Select the correct safety rules to follow when using hand tools.
6. Select the correct safety rules to follow when using power tools.
7. Select the correct safety rules associated with fire safety.
8. Point out the classes of fires according to the material burning.
9. Point out the types of fire extinguishers and methods of use.
10. Select the correct procedures for evacuating the building in case of a fire.
11. Identify types of burns and the correct treatment of each.
12. Complete a safety pledge form.
13. Develop a safety poster for a specific area in the shop.
14. Select the proper safety attitudes for Building Maintenance.
15. Point out the proper safety factors for each situation in the shop.
16. Explain the meaning of various safety rules.
17. Apply safety rules to shop situations.
18. Draw a building evacuation plan.
19. List things that can be done to prevent fires in the class, community, and home.
20. List the proper steps to follow for a building tornado alert.

UNIT V

GENERAL SAFETY

SUGGESTED TEACHING ACTIVITIES

I. Objective sheet

   A. Discuss unit objectives with students.

   B. Discuss each specific objective with the students.

   C. Have the students complete the objectives in the most logical sequence for the shop organization.

   D. Add any necessary objectives.

II. Information and assignment sheets

   A. INFORMATION SHEET 1--WHAT SAFETY CAN BE

      1. Explain the relationship of the shop's safety program to OSHA and industrial safety.

      2. Stress the importance of each individual's safety attitude and participation in the shop safety program.

      3. Discuss how each safety rule applies to shop work.

      4. Discuss the type of clothing required in the shop.

      5. Make sure each student has completed the Safety Pledge Form included in Unit I.

      6. Use the following assignment sheets to reinforce this area of information:

         a. ASSIGNMENT SHEET 1--SAFETY POSTER

            (1) Provide poster board and drawing materials for the students to use in constructing posters.

            (2) Display the posters on the shop walls.

         b. ASSIGNMENT SHEET 2--SELECTING SAFETY ATTITUDES

            (1) Discuss ways safety attitudes can be developed.

            (2) Discuss each of the answers as it relates to the shop.

         c. ASSIGNMENT SHEET 3--MATCHING SAFETY TERMS AND SITUATIONS

B. INFORMATION SHEET 2--TOOL AND EQUIPMENT SAFETY

1. Give examples of misused tools and equipment in the shop.

2. Show examples of tools which are unsafe to use.

3. Post safety posters about the use of hand and power tools.

4. Use the following assignment sheets to reinforce this area of information.

    a. ASSIGNMENT SHEET 4--EXPLAINING SAFETY RULES

        (1) The students may need to review INFORMATION SHEET 4 to complete questions regarding fire safety before completing this activity.

        (2) Explain each answer as it applies to the shop.

    b. ASSIGNMENT SHEET 5--SAFETY RULE APPLICATION

        (1) This assignment calls for a more complex explanation of safety rules and can be used with the more advanced students.

        (2) The questions may be given orally to stimulate class discussion.

C. INFORMATION SHEET 3--FIRE SAFETY

1. Arrange for a guest speaker from the fire department to make a presentation on:

    a. "Types of Fires"

    b. "Types of Fire Extinguishers"

    c. "Treatment of Burns"

2. Explain the use of the fire equipment in the shop.

3. Show the location of first aid materials for burns.

4. Use the following assignment sheets to reinforce this area of information:

    a. ASSIGNMENT SHEET 6--BUILDING EVACUATION

        (1) Explain the methods of evacuating the shop in case of fires.

        (2) Post the best drawings at exits in the shops.

b. ASSIGNMENT SHEET 7--PREVENTING FIRES

(1) Give some examples of things the class might do as a group to promote fire prevention.

(2) Put together a master list of the better ideas that are turned in to give the students.

III. Transparency masters

(NOTE: Transparency masters are included in the student manual and may be used as information sheets.)

A. TM-1--WHAT TO INCLUDE IN YOUR SAFETY PROGRAM

B. TM-2--DON'T JUST PREACH SAFETY--PRACTICE IT

C. TM-3--LEARN TO RECOGNIZE UNSAFE CONDITIONS

D. TM-4--AVOID HORSEPLAY

E. TM-5--BE SURE YOU HAVE PROPER VENTILATION

F. TM-6--REMEMBER TO REMOVE DANGEROUS JEWELRY OR CLOTHING

G. TM-7--USE HAND TOOLS CORRECTLY

H. TM-8--MAKE SURE THE POWER CAN'T COME ON WHEN MAKING ADJUSTMENTS

I. TM-9--TYPES OF FIRE EXTINGUISHERS

J. TM-10--KNOW YOUR FIRE EXTINGUISHERS

IV. Answers to assignments

(NOTE: Answers may vary, but class participation is more important than specific answers.)

V. Testing

A. The test is divided into four parts

(NOTE: Each part covers one information sheet.)

B. Various approaches may be used in testing.

1. Each part of the test may be given as the student reviews the information on one information sheet.

2. Give the entire test upon completion of all the information sheets in the unit.

3. Give one or more parts of the test as an additional assignment, or to reinforce areas the student did not understand.

C. Have each student take the test until 100% accuracy is achieved.

(NOTE: The test may be given orally to students who lack writing abilities.)

D. File the graded test in the students' permanent files.

E. Add test parts corresponding to any information area or sheets added to the unit.

VI. Answers to the test

A. Answers are based on the total information covered in the unit.

B. For convenience of grading, make corresponding answer sheets for any test parts added.

VII. References

A. Henrich, H. W. Industrial Accident Prevention. 4th ed. Manchester, Missouri: McGraw-Hill Book Co., Webster Division, 1959.

B. Kigire, Denis J. Teacher Liability in School Shop Accidents. Ann Arbor, Michigan: Prokken Publications, Inc., 1963.

C. Occupational Curriculum Laboratory. Instructor's Guide: An Introduction to Shop and Laboratory Teaching. 7th ed. Commerce, Texas: East Texas State University, 1977.

D. Division of Occupational Safety. Occupational Safety and Health Standards. Austin: Texas State Department of Health.

E. Poster Director. National Safety Council, Chicago 1966-67.

F. School Shop Safety Manual. Board of Education of the City of New York, Brooklyn, 1965.

G. Williams, William A. Accident Prevention Manual For Shop Teachers. Chicago: American Technical Society, 1969.

UNIT V

GENERAL SAFETY

INFORMATION SHEET 1--WHAT SAFETY CAN BE

I. Explanation of safety

A. Being careful so you are not injured or cause an accident

B. OSHA

1. Occupational Safety and Health Act--Began in 1970
2. The law assures every working man or woman in the nation safe and healthful working conditions and the safekeeping of our human resources.
3. The law also organized accident-prevention programs in the school shops.

C. General safety includes:

1. Attitudes
2. Personal safety
3. Group safety
4. Shop safety
5. Clothing and personal protective equipment
6. Hand tool safety
7. Power tool safety
8. Fire safety

II. Safety attitude

A. The proper safety attitude is a must in the Building Maintenance shop, where each student will be working with hazardous equipment.

B. Most accidents are caused by thoughtless and careless people.

C. Every student must be on guard against accidents at all times.

D. Visiting in the shop should be avoided because it distracts from a person's alertness around hazardous equipment.

III. Personal safety

- A. Dress properly. Do not wear loose clothes.
- B. Wear a cap when working around moving parts to keep hair from getting caught in machinery.
- C. Wear proper eye protection at all times.
- D. Roll up long sleeves to above your elbows.
- E. Wear an apron or shop coat to protect your clothes from oil and dirt.
- F. Wear hard toe shoes when working around equipment or with heavy material
- G. Wear heavy socks and protective shoes in the shop.
- H. Wear special protective clothing when working with chemicals, insecticides, or other harmful chemicals.
- I. Wear gloves, where applicable, to avoid burns and cuts.
- J. Do not wear gloves around machinery and rotating parts.

IV. Shop safety

- A. Do not horseplay in the shop.
- B. Keep the shop clean and neat.
- C. Observe all posted safety rules.
- D. Do not operate equpiment without permission.
- E. Report all injuries even if they seem small.
- F. Know the location of all fire extinguishers and exits.
- G. Remove rings, watches, and other jewelry before working in shop areas.
- H. Keep oily rags in a closed metal container and empty container on a regular basis.
- I. Wipe up spilled oil, grease, or other slippery substances from the floor.
- J. Keep paint, thinners, and other flammable materials in a metal cabinet.
- K. Do not run in the shop. Running is very dangerous.
- L. Keep all machines and tools clean and in good working order.
- M. Do not use compressed air to clean machines of metal chips and cutting oil.
- N. Get help when moving heavy objects.
- O. Have adequate ventilation for jobs where fires and dust are a hazard.
- P. Never operate a machine until all guards are in place.
- Q. Be alert at all times. Do not take chances.
- R. Report all breakage or damage to equipment immediately to the instructor.
- S. Return tools to storage areas when the tools are not in use.

UNIT V

GENERAL SAFETY

INFORMATION SHEET 2--TOOL AND EQUIPMENT SAFETY

I. Hand tool safety

A. Always focus your full attention on the work.

B. Use the right tool for the right job.

C. Learn how to use the tool properly.

D. Keep tools in their best condition.

E. Keep each tool in its place.

F. When using sharp-edged tools, cut away from your body.

G. Keep sharp-edged tools away from the edge of a bench or work area.

H. Carry sharp-pointed tools with the cutting edge or point down.

I. Keep tools sharp and clean.

J. Always use a handle on a file.

K. Do not strike hardened metal or tools with a hard-faced hammer.

L. Avoid mushroomed or battered heads on metal tools by keeping them ground smooth and square.

M. Never carry sharp and pointed tools in your pockets.

N. Do not use worn or broken tools.

(NOTE: Report them to instructor.)

II. Power tool safety

A. Be sure all power tools are grounded with three-wire conductor cord.

B. Power tools should be inspected and serviced regularly by qualified maintenance personnel.

C. Read and understand all of the manufacturer's safety recommendations.

D. Be familiar with the operating procedures of the tool being used.

E. Inspect electrical cords to see that they are in good condition.

F. Do not leave electrical cords where they may be run over or damaged.

G. Be sure that all safety guards are in place and in working order.

H. Remove ties, rings, or wristwatch, and roll up long sleeves before using power tools.

I. Be sure that your hands are dry.

J. Make all adjustments and inspections with the power OFF and the electrical cord "Disconnected."

K. Before connecting to a power source, be sure that the switch is in the "Off" position.

L. Wear safety goggles and a dust mask when the work requires it.

M. Be sure that the materials being worked are securely clamped in the machines and will clear all machine parts when moving.

N. Keep your attention focused on the work.

O. A change in sounds during power-tool operation can indicate trouble and should be checked immediately,

P. When work is completed, shut off all power tools.

Q. When work is completed, disconnect the power tool from the power source.

R. After the tool is disconnected, remove blades, bits, or any other cutter from the tool.

S. Store power tools and blades, bits, or other cutters in their proper place.

T. When the power tool will not work properly, remove it from service.

(NOTE: Report it to the instructor.)

UNIT V

GENERAL SAFETY

INFORMATION SHEET 3--FIRE SAFETY

I. General rules

A. Practice fire prevention

B. Find out what material is burning when a fire starts

C. Report a fire quickly

D. Know how to use a fire extinguisher

(WARNING: DO NOT play with firefighting equipment because it may not work when you need it.)

E. Know the types of extinguishers

(WARNING: Using the wrong type of extinguisher on a fire is dangerous.)

F. Know the location of the fire alarm

G. Know how to treat burns

H. Keep a clean shop, with flammables stored properly

I. Know the correct way to leave a building in case of fire

(NOTE: If there is not a plan on how to leave the building in case of fire posted by the door, ask your instructor for instructions.)

II. Types of fires

A. Class A--Ordinary combustibles such as wood, paper, or cloth

B. Class B--Flammable liquids or grease such as gasoline, paints, or oils

C. Class C--Electrical equipment such as motors and switches

D. Move away from the building during a fire.

(NOTE: Explosions often occur during a fire.)

V.	Types of burns	Appearance of skin	Treatment
A.	First degree	Reddened skin	Apply cold water
B.	Second degree	Blistered skin	Apply cold water and sterile gauze
C.	Third degree	Charred or seared skin	Get immediate medical help

WHAT TO INCLUDE IN YOUR SAFETY PROGRAM

Planned Safety

ATTITUDES

FIRE SAFETY

PERSONAL SAFETY

POWER TOOL SAFETY

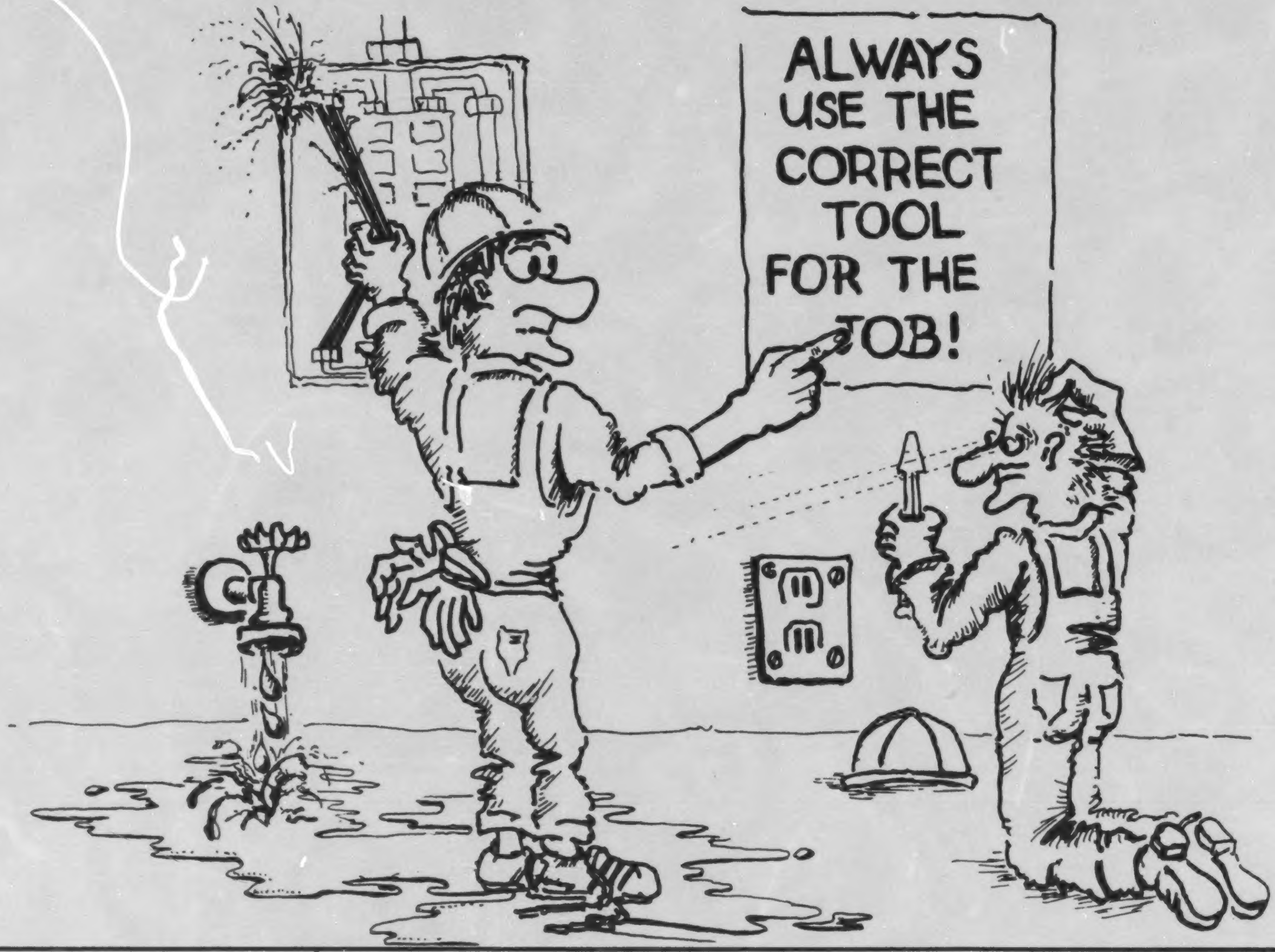
GROUP SAFETY

HAND TOOL SAFETY

SHOP SAFETY

CLOTHING AND PROTECTIVE EQUIPMENT

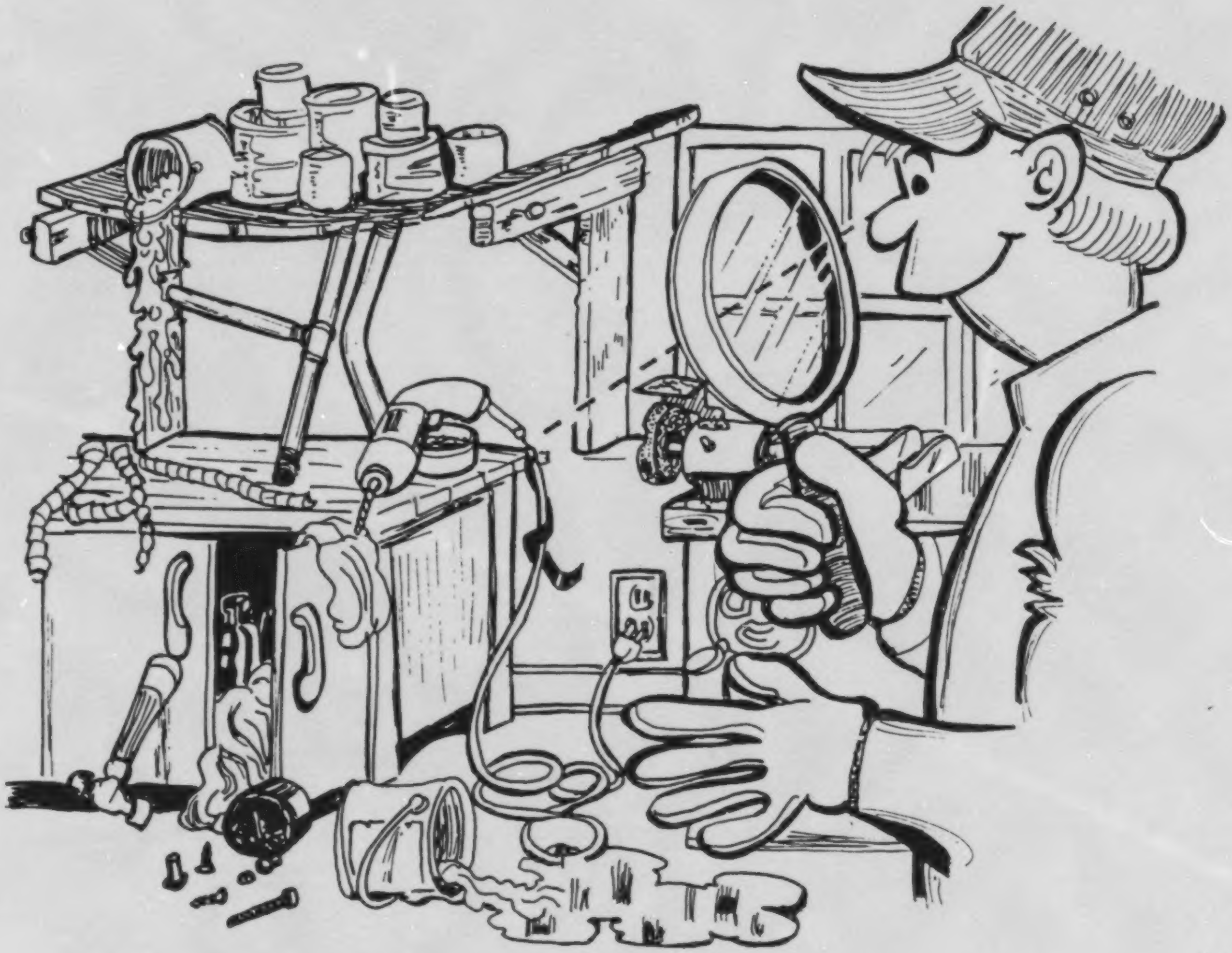
DON'T JUST PREACH SAFETY--PRACTICE IT


ALWAYS USE THE CORRECT TOOL FOR THE JOB!

TM-2

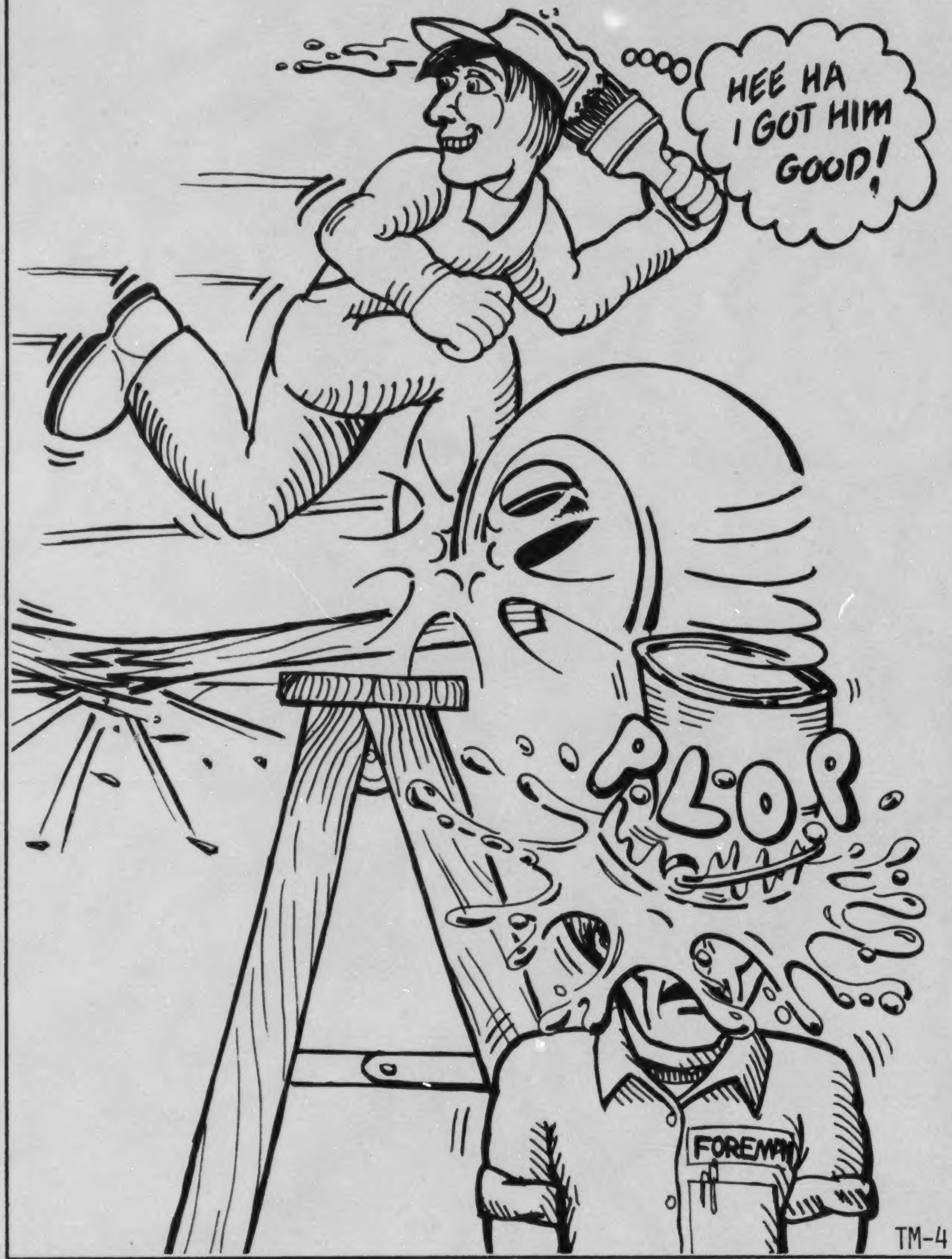
195

LEARN TO RECOGNIZE UNSAFE CONDITIONS



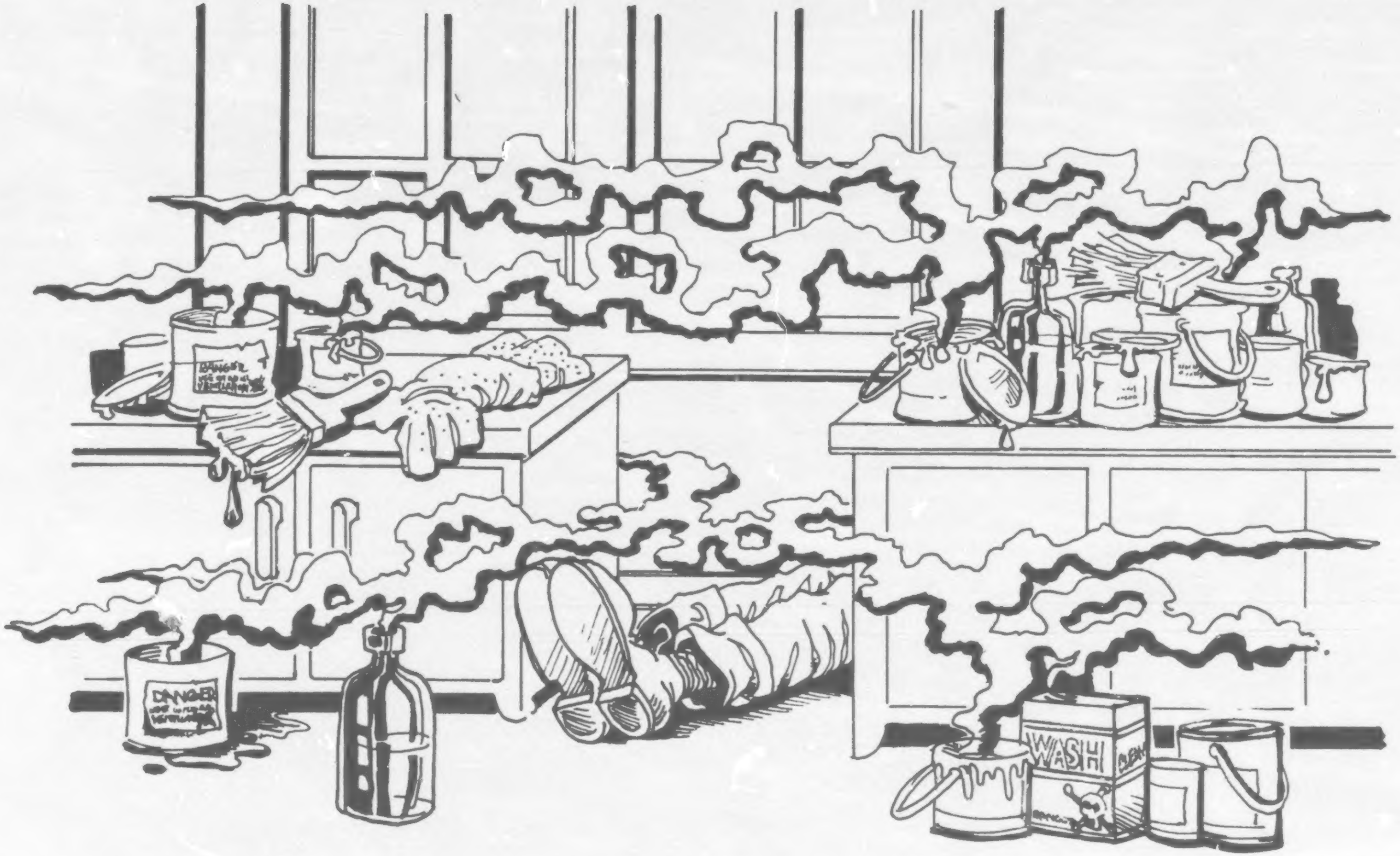
TM-3

AVOID HORSEPLAY

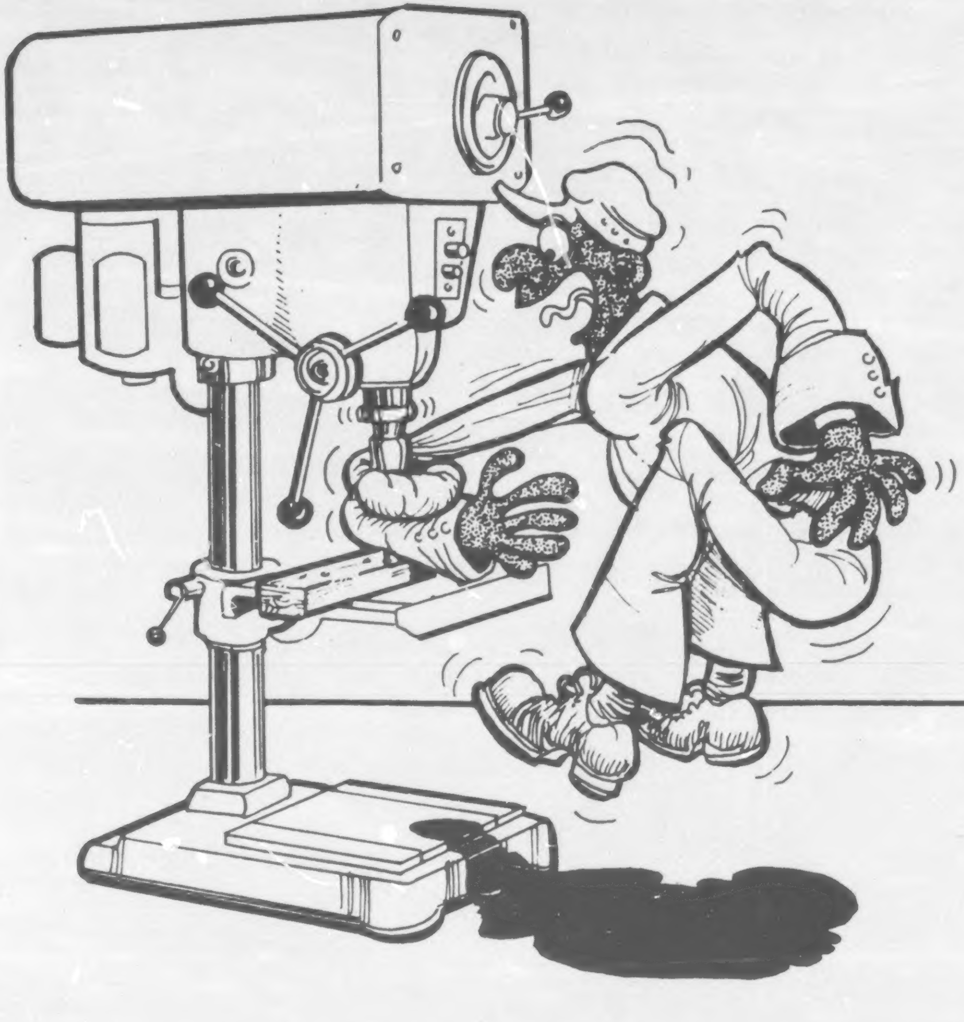

HEE HA I GOT HIM GOOD!
PLOP
FOREMAN

TM-4

BE SURE YOU HAVE PROPER VENTILATION

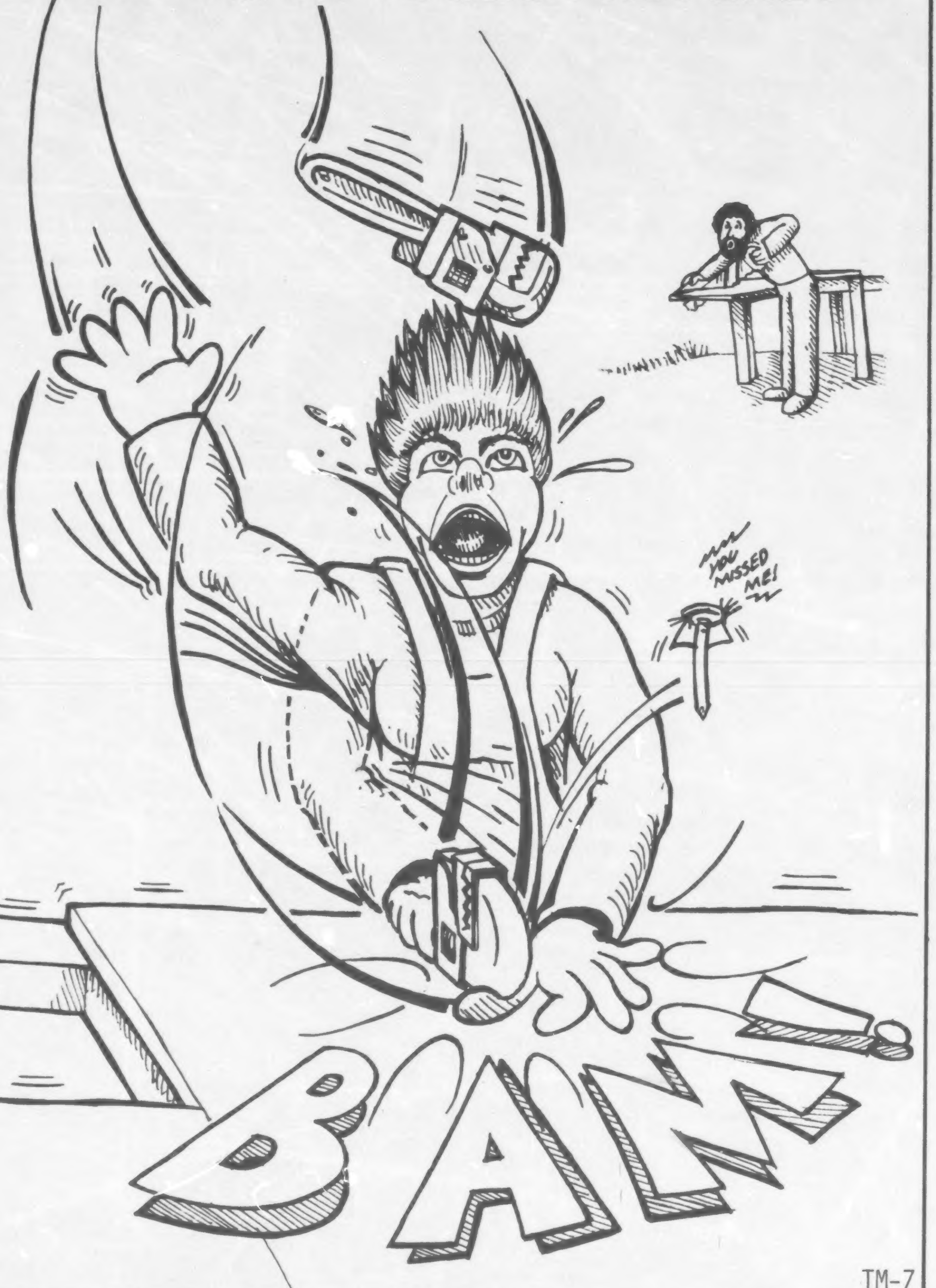

DANGER
DANGER
WASH
CLEAN

REMEMBER TO REMOVE DANGEROUS JEWELRY OR CLOTHING



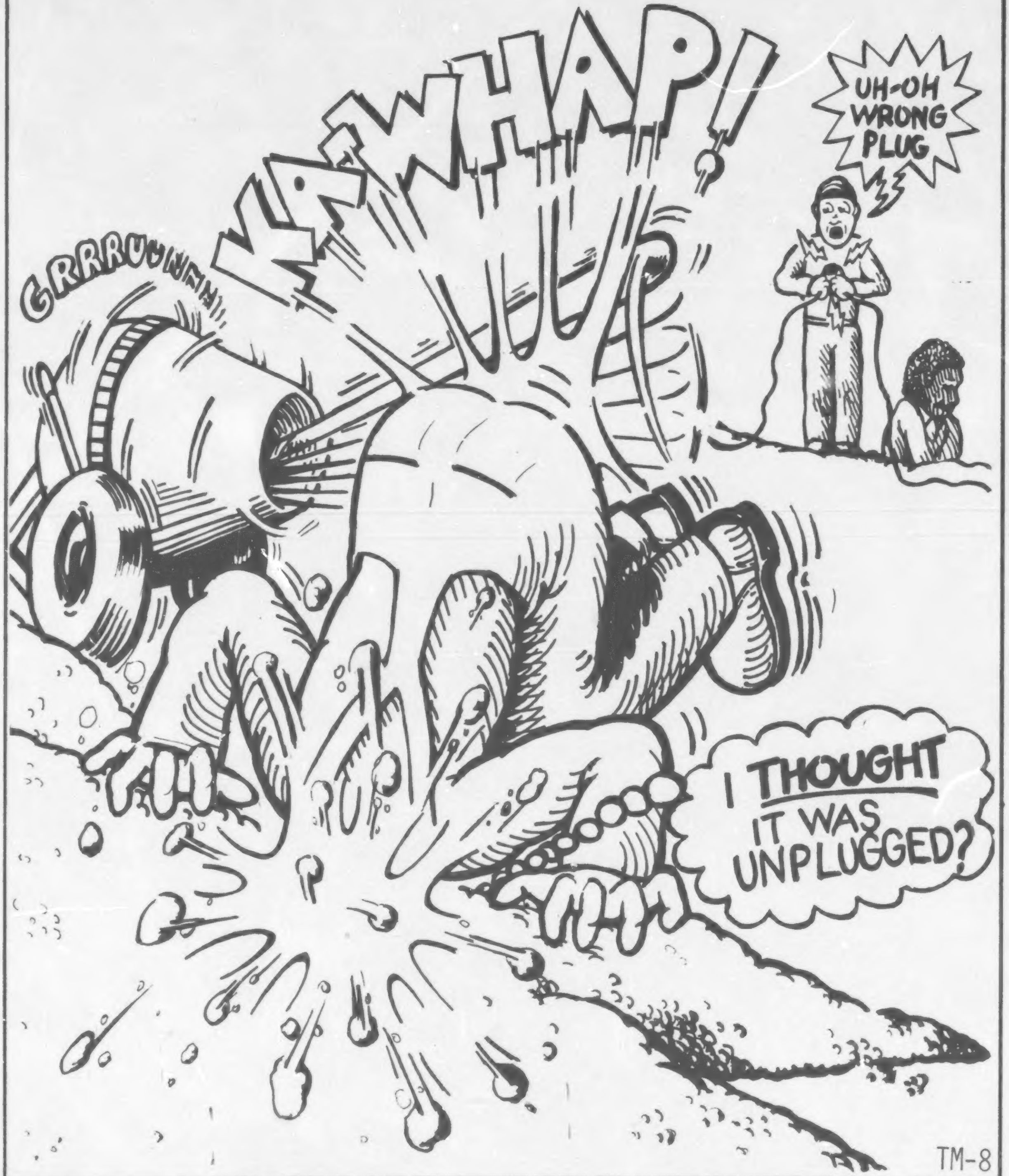
TM-6

USE HAND TOOLS PROPERLY


YOU MISSED ME!
BAM!

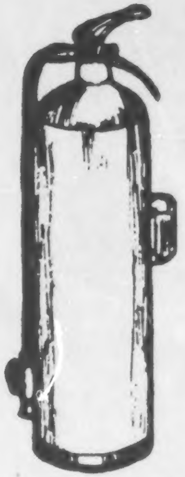
TM-7

MAKE SURE THE POWER CAN'T COME ON WHEN MAKING ADJUSTMENTS

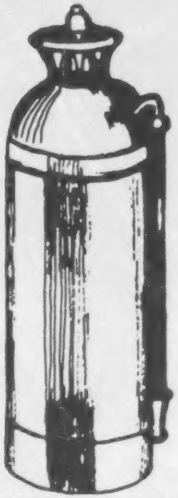

GRRRUUNNN
KA-WHAP!
UH-OH WRONG PLUG
I THOUGHT IT WAS UNPLUGGED?

TM-8

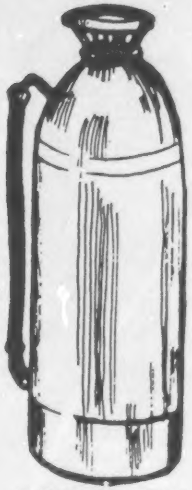
TYPES OF FIRE EXTINGUISHERS



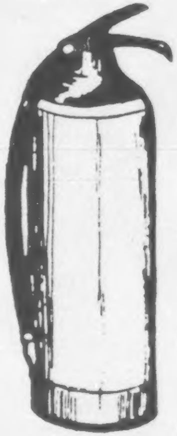
DRY CHEMICAL



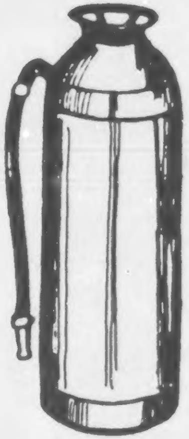
GAS CARTRIDGE



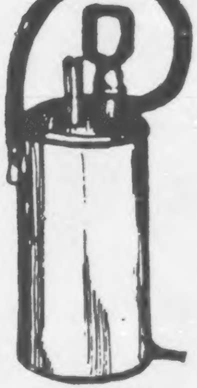
SODA ACID



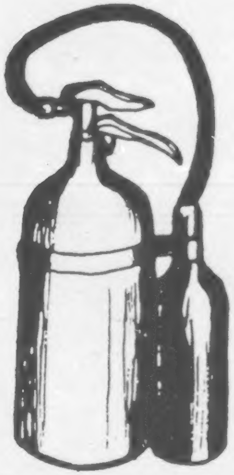
PRESSURIZED WATER



FOAM



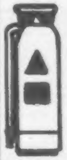
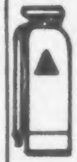
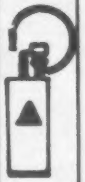
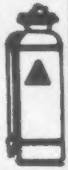
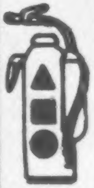
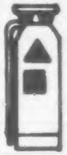
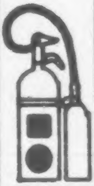
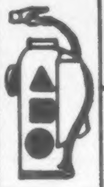
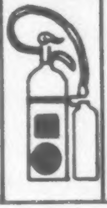
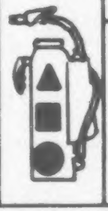
PUMP TANK



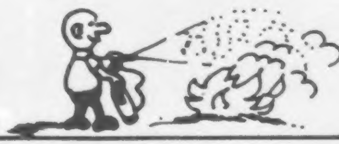
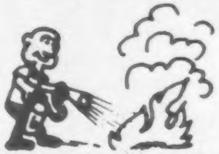
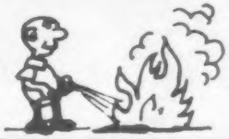
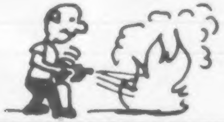
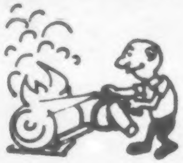
CARBON DIOXIDE

TM-9

KNOW YOUR FIRE EXTINGUISHER

DECIDE THE CLASS OF FIRE YOU ARE FIGHTING		TYPE OF EXTINGUISHER					
		FOAM	CARBON DIOXIDE	WATER	PUMP TANK	GAS CARTRIDGE	DRY CHEMICAL
A	WOOD PAPER CLOTH ETC.						
B	GASOLINE PAINTS OILS						
C	MOTORS SWITCHES						

HOW TO OPERATE

	**FOAM:** Don't spray the stream into the Burning Liquid. Allow Foam to Fall Lightly on Fire .
	**CARBON DIOXIDE:** Direct Discharge as Close to Fire as Possible. First at Edge of Flames and Gradually Forward and Up
	**SODA-ACID, GAS CARTRIDGE:** Direct Stream at Base of Flames
	**PUMP TANK:** Place Foot on Footrest and direct Stream at Base of Flames
	**DRY CHEMICAL:** Direct at Base of Flames. Inthe Case of Class A Fires, Follow up Up by Directing the Dry Chemicals at Remaining Flames

UNIT V

GENERAL SAFETY

ASSIGNMENT SHEET 1--SAFETY POSTER

DIRECTIONS: Develop a safety poster using a 12" x 18" sheet of poster board. Use one of the specific safety rules for one of the following shop areas:

(NOTE: Be creative and neat. Posters will be displayed in the shop. Use the space below to sketch or list your ideas and then discuss them with your instructor before making your poster.)

General shop
Hand Tools
Power Tools
Carpentry
Plumbing
Electrical Wiring
Masonry
Painting
Flooring
Glazing

UNIT V

GENERAL SAFETY

ASSIGNMENT SHEET 2--SELECTING SAFETY ATTITUDES

DIRECTIONS: Select proper attitudes by answering TRUE or FALSE in the space provided at the left of each statement.

_____ 1. The reason someone usually gets hurt in a shop is due to carelessness.

_____ 2. Safety in the shop applies only when you are operating machinery.

_____ 3. Learning the skill is more important than learning safety on the job.

_____ 4. Injuries should be reported at once.

_____ 5. Accidents don't happen; they are usually caused by people.

_____ 6. It is all right to break small minor safety rules if one is careful.

_____ 7. When lifting heavy objects, it is always best to lift with your back.

_____ 8. Goals for safety should be clean work areas, use of safeguards, and following safety rules.

_____ 9. Hand tools are safe and can't cause injuries.

_____10. Horseplay is allowed in the shop if you are careful.

_____11. Running in the shop is permitted only if you are in a hurry.

_____12. Ask questions if in doubt about how to do a job in a safe manner.

_____13. Protect your eyes at all times.

_____14. Wear the clothing that is correct for the job.

_____15. You can operate machines when you feel like it.

_____16. Safety includes proper clean-up and equipment maintenance.

_____17. It is not your responsibility to clean up oil spills that were made by others.

_____18. You should tell others if you see them doing something incorrectly or without the proper safety equipment.

_____19. Safety glasses should be worn only when you know there are possible eye hazards.

_____20. Safety rules posted on machines are for anyone that uses that machine.

GENERAL SAFETY

ASSIGNMENT SHEET 3--MATCHING SAFETY TERMS AND SITUATIONS

DIRECTIONS: Match the statement on the left with the correct word or words in the right hand column. Place the correct letter in the space provided to the left.

_____ 1. When working with sharp tools always

_____ 2. Hand tools should be

_____ 3. All files should have

_____ 4. Protect your eyes when

_____ 5. To prevent accidents, always

_____ 6. A person who violates safety rules should be

_____ 7. Oily rags are to be placed in a

_____ 8. Spilled oil and grease can cause you to

_____ 9. Long hair should be contained by a

_____10. Power tools should be properly

_____11. Training for safety creates

_____12. Lifting with your back can cause

_____13. Eye injuries can be caused by

_____14. Electrical shock can result from

_____15. Working safely is a

_____16. Know how to fight fires with

_____17. Charred flesh burns are

_____18. OSHA is

_____19. Accidents are caused by

_____20. Horseplay in the shop is

A. Wood handles

B. Cap

C. Not allowed

D. Grounded

E. Slip and fall

F. Third degree

G. Frayed cords

H. Carelessness

I. Good habit

J. Flying chips

K. Extinguishers

L. Grinding

M. A law protecting workers

N. Safety awareness

O. Metal container

P. Reported to instructor

Q. A bad injury

R. Cut away from you

S. Stay alert

T. Kept clean and repaired

UNIT V

GENERAL SAFETY

ASSIGNMENT SHEET 4--EXPLAINING SAFETY RULES

Directions: Answer each of the following questions in the space provided.

(NOTE: This could be used as a class discussion.)

1. Describe the meaning of OSHA.

2. Why are most accidents caused?

3. How can accidents be prevented?

4. What should you do if you should have the slightest injury?

5. Seared or charred skin is considered a ____________________ degree burn;

   If skin is blistered, it is a ________________ degree burn;

   If skin is reddened only it is a ______________ degree burn.

6. What degree burn should receive immediate medical treatment?

7. What is the best type of shirt to wear in the shop?

8. Why is jewelry dangerous when worn in a shop?

9. What should be worn over long hair?

10. When should gloves be worn?

11. What should be worn to protect the eyes?

12. When is oil or grease a hazard?

13. Why should you never attempt to stop a machine by hand?

14. When can you operate a machine?

15. What should you use to clean a machine?

16. Where are oily rags kept? Why?

17. Where and how should inflammable materials be stored?

18. List 3 safety rules for the use of hand tools.

    1.
    2.
    3.

19. Where are the fire extinguishers located in your shop?

20. List the 3 classes of fires and describe the type of fire extinguisher needed to put out a particular fire.

UNIT V

GENERAL SAFETY

ASSIGNMENT SHEET 5--SAFETY RULE APPLICATION

DIRECTIONS: After completing the previous assignment sheets and taking part in class discussions, answer the following study questions to prepare you for the safety test.

(NOTE: Instructors may want to review these questions in class.)

1. What is necessary to do a safe, but well-done job?

2. What is the proper dress when working around machinery?

3. Name 5 dangerous areas where eye protection is required.

4. What does ABC (Always Be Careful) of safety mean to you?

5. What is the best safety guideline to remember when using hand tools?

6. Why must you keep alert when operating machinery?

7. Describe the dangers when shop areas and floors are not clean.

8. Why should we follow safety rules?

9. How can you do your part in the shop's total safety program?

10. Why can group safety be the best way of controlling accidents?

UNIT V

GENERAL SAFETY

ASSIGNMENT SHEET 6--BUILDING EVACUATION

DIRECTIONS: Draw a sketch of your classroom and building. Include such details as hallways, doorways, fire escapes, windows, stairways, and other important features. Use a dark pen to draw the building, and a red pen to draw dotted lines and arrows showing the best paths to take when leaving the building during a fire. Write any notes on the drawing that you feel might tell a person what to do or expect during a fire.

UNIT V

GENERAL SAFETY

ASSIGNMENT SHEET 7--PREVENTING FIRES

DIRECTIONS: List the things you can do to prevent fires in each of the following instances. Be specific.

1. In your Building Maintenance class

2. In your community

3. In your home

UNIT V

GENERAL SAFETY

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet 1

Evaluated to the satisfaction of the instructor.

Assignment Sheet 2

1. True
2. False
3. False
4. True
5. True
6. False
7. False
8. True
9. False
10. False
11. False
12. True
13. True
14. True
15. False
16. True
17. False
18. True
19. False
20. True

Assignment Sheet 3

1. R
2. T
3. A
4. L
5. S
6. P
7. O
8. E
9. B
10. D
11. N
12. Q
13. J
14. G
15. I
16. K
17. F
18. M
19. H
20. C

Assignment Sheet 4

(NOTE: Information should include the following general knowledge.)

1. Occupational Safety and Health Act of 1970--provides healthful working conditions
2. Carelessness of people
3. Being safety-conscious
4. Report the injury immediately and get treatment or first aid
5. Third degree, second degree, first degree
6. Third degree
7. Long sleeve shirt
8. Jewelry can be caught in moving machinery or can conduct electricity if it comes in contact with electrical connections.
9. Some type of cap
10. When hands are in danger of getting burned and when handling metal with sharp or rough edges which could cut you. (Caution-Gloves are dangerous around moving parts of machines.)
11. Safety goggles or face shield
12. Because they can cause serious falls if they are on the floor. They can cause serious hand injuries when on hand tools; they are fire hazards and they can create an explosion if they come in contact with compressed oxygen
13. Because you may get caught by the machine's moving parts, causing serious injuries.
14. Only after receiving the proper operating instructions and proper permission from the instructor
15. A brush to clean the metal chips, then a rag to wipe cutting oil.
16. In a closed metal container. Because they are fire hazards where spontaneous combustion occurs
17. In a safety container or a well-ventilated compartment, away from heat sources
18. Any three of the hand tool specific safety rules are accepted.
19. Locations of fire extinguishers vary from shop to shop. Ensure that student knows location situation of your particular shop.

20. Class A--Combustible materials
    Class B--Inflammable materials
    Class C--Electrical

    Class A--Foam, soda acid, water, CO^2 and dry chemical
    Class B--Foam, CO^2, dry chemical
    Class C--CO^2, dry chemical

Assignment Sheet 5

Answers should contain the following general information to be acceptable.

1. To know, understand, and practice the safety rules on the job to be performed.

2. Do not wear loose clothes. Roll sleeves up above the elbows. Wear a face shield or safety goggles. Remove rings, watches, and other jewelry which may get caught in revolving parts of machines. Hair should be trimmed or a cap worn to hold loose, long hair.

3. A. Grinding

   B. Machining

   C. Electric Welding

   D. Gas welding

   E. Forge

4. ABC of Safety means to Always Be Careful.

5. Use the right tool for the right job! don't mistreat tools; and be careful.

6. To keep from getting hands and fingers in rotating parts.

7. A. Scrap on floor can cause serious falls.

   B. Oil, grease, and other slippery substances will cause serious falls.

   C. Oil, grease, and other flammable liquids are fire hazards.

   D. Oily rags are fire hazards.

   E. Water is a good conductor of electricity and can cause shocks.

   F. Scrap on tables can fall and cause serious injuries.

8. A. To keep from getting hurt and to protect others.

   B. To develop good safe work habits.

9. By following all safety rules and taking part in the shop's safety program.

10. When every person in a shop is safety-conscious, it is less likely for an accident to occur because of carelessness.

Assignment Sheets 6 and 7

Evaluated to the satisfaction of the instructor.

UNIT V

GENERAL SAFETY

TEST--PART 1

1. Explain safety as it applies to you in the following areas:

   a. Define safety (Circle the correct answer.)

      (1) Freedom from machine trouble

      (2) Preventing accidents and injury

      (3) Looking around you

   b. The Occupational Safety and Health Act does which of the following? (Circle the correct answer.)

      (1) Provides medical help for the injured.

      (2) Assures every working person safe and healthful working conditions and preservation of human resources.

      (3) Organizes accident-prevention programs in school shops.

   c. General safety includes which of the following? (Circle the correct answers.)

      (1) Attitude

      (2) Personal safety

      (3) Group safety

      (4) Safety deposit box

      (5) Shop safety

      (6) Clothing and equipment safety

      (7) Hand and power tool safety

2. Point out the importance of good safety attitudes by placing a "✓" in front of each correct statement.

   _____ a. The proper attitude is a must in a Building Maintenance shop.

   _____ b. Most accidents are caused by other people.

   _____ c. Each student should be on guard against accidents at all times.

   _____ d. Visiting should be done during shop time because it keeps others alert.

3. Point out the correct personal safety rules to follow in the shop by placing the number of the correct answer in the blank provided:

_____ a. Clothing should fit

(1) loosely

(2) close to the body

(3) several sizes too small

_____ b. To keep hair from getting caught in moving parts you should wear

(1) a ribbon

(2) an army helmet

(3) a cap

_____ c. When wearing long sleeves in the shop, you should

(1) roll them above your elbows

(2) cut them off at the shoulder

(3) leave the sleeves unbuttoned

_____ d. To protect your eyes, wear

(1) a cardboard shield with holes for your eyes

(2) regular eye glasses

(3) safety glasses

_____ e. To protect your clothes from oil, wear

(1) an apron or shop coat

(2) clothes made from oil rags

(3) heavy armor

_____ f. The best type of shoes to wear in the shop are

(1) tennis shoes

(2) beach shoes

(3) hard toed shoes

_____ g. Clothing that would be worn in the welding area is

(1) heavy long sleeved shirt and pants

(2) light tee shirt and shorts

(3) a Sunday suit

_____ h. You should wear gloves when

(1) operating machinery

(2) welding or handling sharp-edged metal

(3) measuring with precision instruments

4. Select the correct safety rules to be followed in the shop by answering True or False to each of the following statements.

_____ a. Wrestling, throwing objects, and general horse-play are fine shop activities.

_____ b. Tools should be cleaned and properly stored.

_____ c. Observe all posted safety rules.

_____ d. Operate equipment without permission if you know how.

_____ e. Report only serious injuries.

_____ f. Know the location of fire extinguishers and exits.

_____ g. Rings, watches, and other jewelry are dangerous only when welding.

_____ h. Oily rags should be kept in a closed metal container.

_____ i. Spilled oil and grease should be spread evenly on the floor.

_____ j. Paint, thinner, and flammable materials should be placed in the center of the shop so it can air out.

_____ k. Do not run in the shop.

_____ l. Keep all machines and tools clean and in good working order.

_____ m. Use compressed air to clean machines of metal chips and cutting oil.

_____ n. Moving very heavy objects by yourself is good for building back muscles.

_____ o. Never operate a machine until all guards are in place.

_____ p. Have good ventilation when there is dust and fumes.

_____ q. Be alert at all times.

_____ r. Report damaged equipment only if it quits running.

UNIT V

GENERAL SAFETY

TEST--PART 2

1. Select the correct safety rules to follow when using hand tools by placing a "✓" in front of each correct statement.

_____ a. Focus your full attention on the work.

_____ b. Use the right tool for the right job.

_____ c. Learn how to use the tool properly.

_____ d. Keep tools in their best condition.

_____ e. Keep each tool in its place.

_____ f. When using sharp-edged tools, cut toward the body.

_____ g. Keep sharp-edged tools away from the edge of a bench or work area.

_____ h. Carry sharp-pointed tools with the cutting edge or point down.

_____ i. Keep tools sharp and clean.

_____ j. Never use a handle on a file.

_____ k. Do not strike hardened metal or tools with a hard-faced hammer

_____ l. Avoid mushroomed or battered heads on metal tools by keeping them ground smooth and square.

2. Select the correct safety rules to follow when using power tools by answering TRUE or FALSE to each of the following.

_____ a. Be sure all power tools are not grounded.

_____ b. Power tools should be inspected and serviced regularly by qualified maintenance personnel.

_____ c. Read and understand all of the manufacturer's safety recommendations.

_____ d. Be familiar with the operation procedures of the tool.

_____ e. Inspect electrical cords to see that they are in good condition.

_____f. Take safety guards off when they get in the way.

_____g. Remove a tie, rings, or a wristwatch, and roll up long sleeves before using power tools.

_____h. Be sure that your hands are dry.

_____i. Make all adjustments and inspections with the power OFF and the cable DISCONNECTED.

_____j. Before connecting to a power source, be sure that the switch is in the ON position.

_____k. Wear safety goggles and a dust mask when you feel like it.

_____l. Be sure that the materials being worked are securely clamped and will clear all machine parts when moving.

_____m. Keep your attention focused on the work.

_____n. Change in sound during power-tool operation normally indicates everything is working fine.

_____o. When work is completed, turn off electricity to all power tools.

_____p. When work is completed, the power tools should be left plugged in.

_____q. After a tool is disconnected, remove blades, bits, or any other cutter from the tool.

_____r. Store power tools and blades, bits, or other cutters in their proper places.

_____s. When a power tool is defective, remove it from service.

UNIT V

GENERAL SAFETY

TEST--PART 3

1. Select the correct rules associated with fire safety by answering, True or False to each of the following:

_____ a. You should practice fire prevention.

_____ b. To know what type materials are burning in a fire is not important to the person putting out the fire.

_____ c. Give a fire the chance to go out on its own before reporting it.

_____ d. Know how to use a fire extinguisher.

_____ e. When you see a fire, the first thing to do is grab the closest fire extinguisher.

_____ f. Know the location of a fire alarm.

_____ g. Only doctors need to know how to treat burns.

_____ h. Keep the shop clean and flammables stored.

_____ i. Know how to leave a building during a fire.

_____ j. Fire drills are for fun.

2. Point out the class of fire according to the material burning by placing the correct number in the blanks.

_____ a. Flammable liquids, such as gasoline, paint, or oil.

_____ b. Ordinary combustibles, such as wood, paper, or cloth.

_____ c. Electrical equipment, such as motors or switches.

1. Class A.

2. Class B.

3. Class C.

3. Point out the types of fire extinguishers and methods of use by writing the correct information from each of the lists below in the blanks provided.

Classes of fires	To operate	Spray
A	Squeeze handle	At base of fire
B	Turn upside down	Over the fire
C		

	Classes	To operate	Spray
a. Foam	______	______	______
b. Carbon dioxide	______	______	______
c. Gas cartridge	______	______	______
d. Water	______	______	______
e. Dry chemical	______	______	______

4. Select the correct procedures for evacuating the building in case of a fire by answering True or False to each of the following:

_____ a. The doors and windows should be left open so that firemen may get to the fire easily.

_____ b. Make sure all the people are out of the building as you leave.

_____ c. Leave the building through the nearest window.

_____ d. Know the best route to take when leaving the building.

_____ e. Stand around close to the building during a fire to see if you can help.

5. Identify the different types of burns and the correct treatment of each by writing the information in the lists below in the correct blanks provided.

Blistered skin	Get immediate medical help
Charred or seared skin	Apply cold water and sterile gauze
Reddened skin	Apply cold water

Burn	Appearance of skin	Treatment
a. Third degree......	______	______
b. Second degree.....	______	______
c. First degree......	______	______

UNIT V

GENERAL SAFETY

ANSWERS TO TEST

PART 1

1. a. (2) Preventing accidents and injury.
   b. (2) Assures every working person safe and healthful working conditions and preservation of human resources.
      (3) Organizes accident-prevention programs in school shops.
   c. (1) Attitude
      (2) Personal safety
      (3) Group safety
      (5) Shop safety
      (6) Clothing and equipment safety
      (7) Hand and power tool safety
2. a. ✓
   b.
   c. ✓
   d.
3. a. (2)
   b. (3)
   c. (1)
   d. (3)
   e. (1)
   f. (3)
   g. (1)
   h. (2)
4. a. True
   b. True
   c. True
   d. False
   e. False
   f. True
   g. False
   h. True
   i. False
   j. False
   k. True
   l. True
   m. False
   n. False
   o. True
   p. True
   q. True
   r. False

PART 2

1. a. ✓
   b. ✓
   c. ✓
   d. ✓
   e. ✓
   f.
   g. ✓
   h. ✓
   i. ✓
   j.
   k. ✓
   l. ✓

2. a. False
   b. True
   c. True
   d. True
   e. True
   f. False
   g. True
   h. True
   i. True
   j. False
   k. False
   l. False
   m. True
   n. False
   o. True
   p. False
   q. True
   r. True
   s. True

PART 3

1. a. True
   b. False
   c. False
   d. True
   e. False
   f. True
   g. False
   h. True
   i. True
   j. False

2. a. 2
   b. 1
   c. 3

3. a. A or B - Turn upside down - Over the fire
   b. B or C - Squeeze handle - At base of fire
   c. A - Turn upside down - At base of fire
   d. A - Squeeze handle - At base of fire
   e. A, B or C - Squeeze handle - At base of fire

4. a. False
   b. True
   c. False
   d. True
   e. False

5. a. Third degree.........Charred or seared skin.....Get immediate medical help

   b. Second degree........Blistered skin............Apply cold water and sterile gauze

   c. First degree.........Reddened skin.............Apply cold water

UNIT VI

SHOP MATH

UNIT OBJECTIVE

After completion of this unit, the student will be able to use the correct math terminology in completing simple shop math involving whole numbers, fractions, metric measurement, angles, and circles. This knowledge will be evidenced through demonstration and by satisfactorily completing a unit evaluation.

SPECIFIC OBJECTIVES

After completion of this unit, the student will be able to:

1. Match the basic math terms to the correct definition.
2. Identify the three standard U. S. lengths of measurement.
3. Select the proper terms used in working math problems.
4. Add and subtract fractions.
5. Multiply fractions.
6. Divide fractions.
7. Identify the three base metric measurements.
8. Point out the correct metric prefixes for multiples and divisions of base measurement.
9. Select the correct multiple or divisions of the meter.
10. Convert U.S. measurements into metric.
11. Identify the parts of a circle.
12. Point out the correct measurement of angles.

UNIT VI

SHOP MATH

SUGGESTED TEACHING ACTIVITIES

I. Objective sheet

   A. Discuss the unit objective with the students.

   B. Discuss each specific objective with the students.

   C. Have the students complete the objectives in the most logical sequence for shop organization.

      (NOTE: This unit may be to detailed for certain levels of students. The instructor may want to utilize this unit throughout the program as the need arises.)

   D. Add any objectives necessary.

II. Information and assignment sheets

   A. INFORMATION SHEET 1--BASIC MATH

      1. Explain how shop math will be used throughout the year.

      2. Discuss the importance of learning shop math for employment.

      3. Discuss the terms used in math problems. (TRANSPARENCY 1--MATH PROBLEM TERMS)

      4. Use the following assignment sheets to reinforce this area of information.

         (NOTE: If these assignments are too elementary for some students, use activities in the Vocational Related Activities Sheets listed in References.)

         a. ASSIGNMENT SHEET 1--ADDING NUMBERS

            (NOTE: Explain how to add numbers on the chalkboard before beginning this assignment.)

         b. ASSIGNMENT SHEET 2--SUBTRACTING NUMBERS

            (NOTE: Explain how to subtract numbers on the Chalkboard before beginning this assignment.)

         c. ASSIGNMENT SHEET 3--MULTIPLYING NUMBERS

            (NOTE: Explain how to multiply numbers on the chalkboard before beginning this assignment.)

         d. ASSIGNMENT SHEET 4--DIVIDING NUMBERS

            (NOTE: Explain how to divide numbers on the chalkboard before beginning this assignment.)

B. INFORMATION SHEET 2--FRACTIONS

1. Explain the use of fractions in the shop.

2. Explain how to change fractions to decimals.

   (NOTE: Provide wall charts with decimal equivalents for the students.)

3. Use ASSIGNMENT SHEET 5--SOLVING PROBLEMS WITH FRACTIONS to reinforce this area of information.

   (NOTE: Explain how to solve problems with fractions on the chalkboard before beginning this assignment.)

C. INFORMATION SHEET 3--METRIC MEASUREMENT

1. Discuss the potential change of measurement in shops from U.S. to metric.

2. Explain how U.S. measurement is changed to metric. (TRANSPARENCY 2--EQUIVALENTS CONVERSION CHARTS)

3. Use the following assignment sheets to reinforce this area of information.

   a. ASSIGNMENT SHEET 6--METRIC MEASURES

      (NOTE: Provide equivalents charts for students to use in completing this assignment.)

   b. ASSIGNMENT SHEET 7--CHANGING U.S. MEASUREMENT TO METRIC

      (NOTE: Allow students to use the charts in Information Sheet 3 to complete the assignment.)

   c. ASSIGNMENT SHEET 8--SELECTING METRIC MEASUREMENT

      (1) Discuss how Metric measurements are used in the U.S. today.

      EXAMPLE: gasoline sold by the liter
      speed measured by kilometers per hour
      precision measurement by millimeters

      (2) Have the students list other things that are measured in Metric measurement.

D. INFORMATION SHEET 4--ANGLES AND CIRCLES

1. Discuss the use of angles and circles in a shop. (TRANSPARENCY 3--ANGLES)

2. Explain how angles can be measured. (TRANSPARENCY 4--MEASURING WITH A PROTRACTOR)

3. Discuss the parts of a circle and how they apply to the shop. (TRANSPARENCY 5--PARTS OF A CIRCLE)

4. Use the following assignment sheets to reinforce this area of information.

   a. ASSIGNMENT SHEET 9--CIRCLES

      (NOTE: Provide compasses and rules for the students to use in completing this assignment.)

   b. ASSIGNMENT SHEET 10--ANGLES

      (NOTE: Provide protractors for the students to use in completing this assignment.)

III. Transparency masters

(NOTE: Transparency masters are included in the student manual and can be used as information sheets.)

A. TM-1--MATH PROBLEM TERMS

B. TM-2--EQUIVALENTS CONVERSION CHARTS

C. TM-3--ANGLES

D. TM-4--MEASURING WITH A PROTRACTOR

E. TM-5--PARTS OF A CIRCLE

IV. Answers to assignments

(NOTE: Answers may vary if the students round off or carry out the different decimal places.)

V. Evaluation

A. The unit test is divided into four parts.

(NOTE: Each part covers one information sheet.)

B. Various approaches may be used in evaluation.

1. Give each part of the test after the student has completed studying the information on the information sheet that applies.

2. Give the entire test upon completion of all of the information sheets in a unit.

3. Give one or more parts of the test as an additional assignment, or to reinforce problem areas of learning.

VI. Answers to test

A. Answers are based on total information covered in the unit.

B. For convenience in grading, make corresponding sheets for any test parts included.

VII. References

A. CVAE Academic Teacher's Guide for Math. Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas 75428

B. CVAE Vocational Related Activity Sheets for Math. Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas 75428

C. Discover Metrics. Beloit Tool Corporation. Swaim Publishing Company, Box 248, Roscoe, Illinois 61073

D. Metrics for Architectural, Civil, and Mechanical Drafting. The Center for Vocational Education. The Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210

UNIT VI

SHOP MATH

INFORMATION SHEET 1--BASIC MATH

I. Basic math terms

A. Whole number--Any natural number that is not broken into parts.

EXAMPLE: 1, 2, 3, 4, . . . 11, 12, 13, 14, and others.

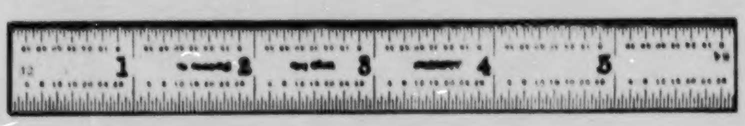
B. Fraction--A part of a whole number or one.

EXAMPLE: 1/16, 1/8, 1/4, 1/2

C. Dimension--The distance or size from one point to another point.

D. Graduation--The mark on a measuring tool indicating size or degrees.

E. Rule--A semi-precision measuring instrument graduated in fractional or decimal parts of an inch.



F. Measure--To find the amount, size, or length of something.

(NOTE: Measurement can include volume, weight, length, etc.)

EXAMPLE: A piece of metal may weigh 50 pounds, be 2 inches in diameter, and 2 feet long.

G. Error--A mistake in reading or figuring total measurement.

H. Decimal--A proper fraction with the bottom number (denominator) being 10, 100, or 1000.

EXAMPLES: .2 or $\frac{2}{10}$

.25 or $\frac{25}{100}$

.255 or $\frac{255}{1000}$

II. Standard measurement

A. Yard--A length of measurement containing 36 inches or 3 feet.

B. Foot--A length of measurement containing twelve inches.

C. Inch--The smallest whole unit of measurement commonly used.

(NOTE: Any measurement less than one inch is a fraction.)

III. Math problem terms

A. Addition--Putting two or more numbers together to find a total.

1. Addend--A number to be added to another.

2. Sum (total)--The answer from adding two or more numbers.

B. Subtraction--Taking one number from another to obtain a remainder (or difference).

1. Minuend--The top number when subtracting.

2. Subtrahend--The bottom number when subtracting.

3. Difference (remainder)--The answer when subtracting.

C. Multiplication--Adding a number to itself a certain number of times.

1. Multiplicand--The top number when multiplying.

2. Multiplier--The bottom number when multiplying.

3. Product--The answer when multiplying.

D. Division--Find out how many of one number there are in another number.

1. Dividend--Number to be divided.

2. Divisor--Number that does the dividing.

3. Quotient--The answer as a result of dividing.

E. Fraction--A part of a whole number or one.

1. Numerator--The top number of a fraction.

2. Denominator--The bottom number of a fraction.

F. Improper fraction--A fraction with the numerator larger than the denominator.

MATH PROBLEM TERMS

ADDITION

15	
+ 10	Addend
25	Sum

SUBTRACTION

12	Minuend
− 10	Subtrahend
2	Difference

MULTIPLICATION

5	Multiplicand
× 4	Multiplier
20	Product

DIVISION

	10	Quotient
Divisor	15) 150	Dividend
	15	
	0	
	0	

FRACTION

3	Numerator
4	Denominator

IMPROPER FRACTION

5	Numerator
4	Denominator

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 1--ADDING NUMBERS

Directions: The following problems deal with the addition of numbers. Complete each of the problems and turn in the sheet to your instructor.

A. Addition of whole numbers

```
             4
EXAMPLES:   +5              12 + 14 = 26
             9
```

```
1.   3          8          12          16          84
    +5         +4         +12         +15         +16
```

```
2.   2 + 4 + 6 =                   16 + 42 + 5 =

     5 + 8 + 12 =                  11 + 101 + 60 =

     10 + 12 + 14 =
```

```
                                                   6,732
3.   50         112        1,100        5,284        521
     80          67          584        3,123        643
    +90        + 95        + 323       +6,324     +1,964
```

B. Addition of decimals

```
EXAMPLES:    .1        .5       .25       .94      .255
           + .6      + .7     + .16     + .38    + .006
             .7       1.2       .41      1.32      .261
```

```
1.    .5        .12       .35       .50       .500
    + .3      + .10     + .66     + .321    + .625
```

```
2.    4.5      25.10     30.525       2.125
    + 4.6    + 50.25   +  3.875       3.375
                                   + 25.650
```

3. 1.5 + 17.8 + 3.4 =

22.25 + 3.75 + 1.04 =

3.255 + 1.125 + 3.005 =

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 2--SUBTRACTING NUMBERS

Directions: The following problems deal with the subtraction of numbers. Complete each of the problems and turn in the sheet to your instructor.

A. Subtraction of whole numbers

1. $\begin{array}{r} 5 \\ -3 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 12 \\ -\ 6 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 25 \\ -13 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 85 \\ -12 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 100 \\ -\ 26 \\ \hline \end{array}$

2. $8 - 2 - 1 =$

   $6 - 3 - 1 =$

   $12 - 2 - 9 =$

   $25 - 5 - 4 =$

   $105 - 65 - 36 =$

3. $\begin{array}{r} 185 \\ -147 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 895 \\ -406 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 1,548 \\ -\ 997 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 5,343 \\ -4,784 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 3,232 \\ -\ 233 \\ \hline \end{array}$

B. Subtraction of decimals

1. $\begin{array}{r} .9 \\ -.6 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} .23 \\ -.11 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} .34 \\ -.14 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} .68 \\ -.60 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} .196 \\ -.099 \\ \hline \end{array}$

2. $\begin{array}{r} 1.5 \\ -1.4 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 1.5 \\ -\ .8 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} .019 \\ -.008 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 15.1 \\ -\ 6.15 \\ \hline \end{array}$

3. $\begin{array}{r} 10 \\ -\ 5.125 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 12 \\ -\ 1.25 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 81.625 \\ -79 \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 16.875 \\ -\ 3.001 \\ \hline \end{array}$

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 3--MULTIPLYING NUMBERS

Directions: The following problems deal with the multiplication of numbers. Complete each of the problems and turn in the sheet to your instructor.

A. Multiplication of whole numbers

EXAMPLES:	4	24
	x 6	x 4
	24	96

1.	8	9	12	21	48
	x 4	x 3	x 10	x 14	x 18

2. 6 x 8 =

7 x 9 =

4 x 12 =

8 x 12 =

15 x 4 =

3.	150	4	285	45
	x 2	x 150	x 500	x 125

B. Multiplication of decimals

1.	.5	.6	.4	4.5	50
	x .1	x .5	x.12	x 2.3	x 1.023

2.	5	.062	562	300
	x .125	x 6.875	x .001	x 5.06

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 4--DIVIDING NUMBERS

Directions: The following problems deal with the division of numbers. Complete each of the problems and turn in the sheet to your instructor.

A. Division of whole numbers

1. 2) 8   4) 16   5) 15   8) 48   12) 96

2. 14) 112   10) 250   15) 300   80) 1600

3. Show the remainders for the following as a fraction:

16) 641   11) 383   12) 476   67) 1,584

4. Show the remainders for the following as a two place decimal:

34) 53   68) 1,489   174) 452

B. Division of decimals

(NOTE: Carry the answer for two decimal places.)

1. .3) .5   .25) 1.50   1.5) 3.45   1.6) .346

2. 6) 5.5   148) 125.4   1.125) 6.75

SHOP MATH

INFORMATION SHEET 2--FRACTIONS

I. Addition and subtraction of fractions

A. Fractions with the same denominators can be added or subtracted by totaling or subtracting the numerators.

EXAMPLE: $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$ $\frac{5}{16} - \frac{3}{16} = \frac{2}{16}$

B. Fractions with different denominators must be changed to fractions of equal value with a common denominator before adding or subtracting.

EXAMPLE: $\frac{1}{2} + \frac{1}{4} =$

1. Divide the larger denominator by the smaller denominator.

EXAMPLE: $\frac{1}{2} + \frac{1}{4} =$

$$\begin{array}{r} 2. \\ 2\overline{)\,4} \\ \underline{4} \end{array}$$

(NOTE: if the denominators will not divide evenly, then multiply each fraction by the other fraction's denominator.)

2. Multiply the numerator of the fraction by the resulting number.

EXAMPLE: $2 \times \frac{1}{2} = \frac{2}{4}$

$\frac{2}{4} + \frac{1}{4} =$

3. Then add the fractions as you would those with the same denominator.

EXAMPLE: $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$

C. To reduce a fraction to the lowest form, divide the denominator and numerator by the same number.

EXAMPLE: $\underline{4}$ can be divided by 4 $\frac{4 \div 4}{8 \div 4} = \frac{1}{2}$

D. When fractions and whole numbers are both used in a problem, the numbers should be changed to an improper fraction and a common denominator found.

1. Multiply the whole number by the denominator of the fraction, and add the result to the numerator.

EXAMPLE: $1\frac{1}{2} + 3\frac{3}{4} =$

$$\frac{2+1}{2} + \frac{12+3}{4} =$$

$$\frac{3}{2} + \frac{15}{4} =$$

2. Find a common denominator for the improper fractions.

EXAMPLE: $\frac{3}{2} + \frac{15}{4} =$

$$\frac{6}{4} + \frac{15}{4} = \frac{21}{4}$$

3. Reduce the improper fraction to the smallest form by dividing the numerator by the denominator.

EXAMPLE: $\frac{21}{4} = \begin{array}{r} 5 \\ 4\overline{)\,21} \\ \underline{20} \\ 1 \end{array}$

$$\frac{21}{4} = 5\frac{1}{4}$$

4. Subtraction of whole numbers and fractions can also be done by changing the numbers to improper fractions.

EXAMPLE 1: $5\frac{1}{4} - 3\frac{3}{4} =$

$$\frac{21}{4} - \frac{15}{4} = \frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$$

EXAMPLE 2: $5\frac{1}{4} - 3\frac{3}{4} =$

$$4\frac{5}{4} - 3\frac{3}{4} = 1\frac{2}{4} = 1\frac{1}{2}$$

(NOTE: If denominators are different, a common denominator must be found.)

II. Multiplication of fractions

A. Common fractions

1. Multiply numerators by numerators and denominators by denominators.

EXAMPLE: $\frac{3}{4} \times \frac{4}{5} = \frac{12}{20}$

2. Reduce the product to the simple form.

EXAMPLE: $\frac{12}{20} = \frac{3}{5}$

B. Whole numbers by fractions.

1. Multiply the whole number by the numerator.

EXAMPLE: $\overset{\curvearrowleft}{3 \times \frac{3}{4}} = \frac{9}{4}$

2. Divide the product by the denominator.

EXAMPLE: $\frac{9}{4} =$

$$\begin{array}{r} 2 \\ 4\overline{)\,9} \\ 8 \\ \hline 1 \end{array} = 2\frac{1}{4}$$

C. Whole numbers by mixed number (whole number and fraction).

1. Multiply by the fraction first.

EXAMPLE: $12 \times 4\frac{1}{2} =$

$$\begin{array}{l} \swarrow \\ 12 \times \frac{1}{2} = \frac{12}{2} = 6 \end{array}$$

2. Then multiply by the whole number.

EXAMPLE: $12 \times 4 = 48$

3. Add the result of each

EXAMPLE: $48 = 6 = 54$

D. Mixed numbers (whole number and fraction) by a whole number.

1. Multiply the fraction first.

   EXAMPLE: $4\frac{1}{2} \times 12 =$

   $\frac{1}{2} \times 12 - \frac{12}{2} = 6$

2. Then multiply the whole number

   EXAMPLE: $4 \times 12 = 48$

3. Add the result of each.

   EXAMPLE: $6 + 48 = 54$

E. Mixed numbers by mixed numbers.

1. Convert each mixed number to an improper fraction.

   EXAMPLE: $1\frac{5}{8} \times 4\frac{3}{4} =$

   $\frac{13}{8} \times \frac{19}{4} =$

2. Multiply numerators by numerators and denominators by denominators.

   EXAMPLE: $\frac{13}{8} \times \frac{19}{4} = \frac{247}{32}$

3. Reduce the results to the simplest form.

   EXAMPLE: $\frac{247}{32} =$

$$\begin{array}{r} 7 \\ 32\overline{)\,247} \\ \underline{224} \\ 23 \end{array} = 7\frac{23}{32}$$

III. Division of fractions

A. Common fractions

1. Invert the divisor.

   EXAMPLE: $\frac{1}{2} \div \frac{2}{3} =$

   $\frac{3}{2}$

2. Multiply the inverted number by the other fraction.

   EXAMPLE: $\frac{1}{2} \times \frac{3}{2} = \frac{3}{4}$

   (NOTE: Reduce the answer if it is an improper fraction.)

B. Mixed numbers

1. Change both mixed numbers to improper fractions.

   EXAMPLE: $\underset{\curvearrowleft}{3\frac{3}{4}} \div \underset{\curvearrowleft}{2\frac{1}{4}} =$

   $\frac{15}{4} \div \frac{9}{4} =$

2. Invert the divisor and multiply.

   EXAMPLE: $\frac{15}{4} \div \frac{9}{4} = \frac{60}{36}$

3. Reduce the answer to the simplest form.

   EXAMPLE: $\frac{60}{36}$

$$\begin{array}{r} 1 \\ 36\overline{)\,60} \\ \underline{36} \\ 24 \end{array} = 1\frac{24}{36} = 1\frac{2}{3}$$

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 5--SOLVING PROBLEMS WITH FRACTIONS

Directions: Complete the following problems dealing with fractions.

A. Add the following:

1. $\frac{1}{4} + \frac{3}{4} =$
2. $\frac{3}{4} + \frac{3}{8} =$
3. $\frac{1}{2} + \frac{1}{4} + \frac{5}{8} =$
4. $1\frac{1}{2} + 3\frac{5}{8} + 1\frac{1}{3} =$
5. $\frac{8}{5} + 1\frac{1}{2} + 6\frac{4}{5} =$

B. Subtract the following:

1. $\frac{4}{5} - \frac{1}{5} =$
2. $\frac{3}{4} - \frac{3}{8} =$
3. $1\frac{3}{8} - \frac{7}{8} =$
4. $4\frac{5}{16} - 3\frac{3}{4} =$
5. $6\frac{7}{8} - 4\frac{15}{16} =$

C. Multiply the following:

1. $\frac{1}{2} \times \frac{3}{4} =$

2. $1\frac{1}{4} \times \frac{1}{2} =$

3. $3\frac{1}{2} \times 4\frac{3}{4} =$

4. $\frac{4}{5} \times 1\frac{3}{8} =$

5. $4\frac{3}{8} \times 1\frac{5}{6} =$

D. Divide the following:

1. $\frac{7}{8} \div \frac{1}{8} =$

2. $3\frac{3}{4} \div \frac{1}{4} =$

3. $4 \div \frac{5}{16} =$

4. $3\frac{3}{4} \div 1\frac{1}{2} =$

5. $\frac{3}{4} \div 4 =$

UNIT VI

SHOP MATH

INFORMATION SHEET 3--METRIC MEASUREMENT

I. Base metric measurements

A. Meter--The base measurement for length in the metric system.

(NOTE: The U.S. equal of this distance is 39.37 inches, or 3 3/8 inches longer than a yard.)

B. Gram--The base measurement for weight in the metric system.

C. Liter--The base measurement for volume in the metric system.

II. Prefixes (multiples or divisions) of base measurement

A. For less than one (meter, gram, liter)

1. Milli (m)--$\frac{1}{1000}$ or x .001
2. Centi (c)--$\frac{1}{100}$ or x .01
3. Deci (d)--$\frac{1}{10}$ or x .1

B. For more than one (meter, gram, liter)

1. Deka (da)-- x 10
2. Hecto (h)-- x 100
3. Kilo (k)-- x 1000

III. Multiples and divisions of the meter

Multiples			Unit	Subdivision		
Kilometer						
10 hm	Hectometer					
100 da m	10 da m	Dekometer				
1000 m	100 m	10 m	Meter			
			10 d m	Decimeter		
			100 c m	10 c m	Centimeter	
			1000 mm	100 mm	10 mm	Millimeter

IV. U.S. to metric conversion

A. Meter--To convert a U.S. measurement of length to metric, multiply the length by the metric equivalent shown in the chart below.

	METRIC EQUIVALENT			
	MILLIMETER	CENTIMETER	METER	KILOMETER
INCH	25.4	2.54	.0254	
FOOT	304.8	30.48	.3048	
YARD	914.4	91.44	.9144	
MILE			1,609.3	1.609

EXAMPLE: 1 inch = 2.54 centimeters = 25.4 millimeters
so to find the equivalent of 5 inches

5 inches x 2.54 centimeters = 12.70 centimeters

and to find the equivalent of 3/4 inch

3/4 = .75 inch

.75 inch x 2.54 centimeters = 1.905 centimeters

and to find the equivalent of 2 1/2 inches

2 1/2 = 2.5 inches

2.5 inches x 2.54 centimeters = 6.35 centimeters

(NOTE: Other equivalents of the above U.S. Measurements could be figured by using the other metric equivalents rather than the 2.54 centimeters.)

B. Grams--To convert a U.S. measurement of weight to metric, multiply the weight by the metric equivalent shown below.

	METRIC EQUIVALENT	
	GRAM	KILOGRAM
OUNCE	25.35	
POUND	453.6	.4536

EXAMPLES: 1 ounce = 28.36 grams and
1 pound = 453.6 grams
so to find the equivalent of 5 pounds

5 pounds x 453.6 grams = 2,268 grams

and to find the equivalent of 100 pounds

100 pounds x 453.6 grams = 45,360 grams

and to find the equivalent of 1,000 pounds
1,000 pounds x 453.6 grams = 453,360 grams

(NOTE: To find the equivalent in the kilograms, use the equivalent .4536.)

C. Liters--To convert U.S. measurement of volume to metric, multiply the volume by the metric equivalent shown below.

METRIC EQUIVALENT

	LITER	DECILITER	CENTILITER
PINT	.473	4.73	47.32
QUART	.946	9.46	94.6
GALLON	3.785	37.85	378.5

EXAMPLES: 1 gallon = 3.785 liters
so to find the equivalent of 4 gallons
4 gallons x 3.785 liters = 15.4 liters
and to find the equivalent of 2 pints
1 pint = .473 liter
2 pints x .473 liter = .946 liter

(NOTE: Other equivalents of the above U.S. measurements could be figured by using other equivalents.)

EQUIVALENTS CONVERSION CHARTS

Metric-English Equivalents

Approximate Values

1 mm = 0.04 inch
1 cm = 0.4 inch
1 m = 39.37 inches
1 km = 0.6 mile
1 cm^2 = 0.16 square inch
1 m^2 = 10.8 square feet
1 m^2 = 1.2 square yards
1 hectare = 2.5 acres
1 cm^3 = 0.06 cubic inch
1 m^3 = 35.3 cubic feet
1 m^3 = 1.3 cubic yards
1 ml = 0.034 ounce
1 cl = 0.34 ounce
1 l = 2.1 pints
1 l = 1.06 quarts
1 l = 0.26 gallon
1 g = 0.035 ounce
1 kg = 2.2 pounds
1 metric t = 1.1 U.S. ton

English-Metric Equivalents

Approximate Values

1 inch = 25.4 mm
1 inch = 2.54 cm
1 foot = 0.305 m
1 yard = 0.91 m
1 mile = 1.61 km
1 square inch = 6.5 cm^2
1 square foot = 0.09 m^2
1 square yard = 0.8 m^2
1 acre = 0.4 hectare
1 cubic inch = 16.4 cm^3
1 cubic foot = 0.03 m^3
1 cubic yard = 0.8 m^3
1 pint = 0.47 l
1 quart = 0.95 l
1 gallon = 3.79 l
1 ounce = 28.35 g
1 pound = 0.45 kg
1 U.S. ton = 0.9 metric ton

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 6--METRIC MEASURES

Directions: Answer each of the following questions in the blanks provided.

A. 1. one meter = ______________ millimeters

2. one meter = ______________ centimeters

3. one meter - ______________ decimeters

4. one dekameter = ____________ meters

5. one hectometer = ___________ meters

6. one kilometer = ____________ meters

B. Under the metric system, length is measured in ______________.

C. Under the metric system, weight is measured in ______________.

D. Under the metric system, volume is measured in ______________.

E. One meter is equal to ________________ inches.

F. One kilogram is equal to ______________ pounds.

G. One liter is equal to ________________ quarts.

H. Estimate the (1) width, (2) length, and (3) height of this room in meters.

1. ________________

2. ________________

3. ________________

I. Estimate your height in centimeters. ____________________

J. Estimate your weight in kilograms. ______________________

SHOP MATH

ASSIGNMENT SHEET 7--CHANGING U.S. MEASUREMENT TO METRIC

Directions: Using the charts in the information sheet, change each of the following U.S. measurements to metric.

A. Change the following to millimeters:

(NOTE: 1 inch = 25.4 millimeters)

1. 2 1/2 inches = ______________________
2. 4 inches = ______________________
3. .050 inch = ______________________
4. 1.5 inches = ______________________
5. 3/4 inch = ______________________

B. Change the following to centimeters:

(NOTE: 1 inch = 2.54 centimeters)

1. 6 inches = ______________________
2. 14 inches = ______________________
3. 27 inches = ______________________
4. 39.37 inches = ______________________
5. 1/2 inch = ______________________

C. Change the following feet to centimeters:

(NOTE: 1 foot = 30.48 centimeters)

1. 3 feet = ______________________
2. 10 1/2 feet = ______________________
3. 5 feet = ______________________
4. 7.75 feet = ______________________
5. 1 1/4 feet = ______________________

D. Change the following feet to meters:

(NOTE: 1 foot = .3048 meter.)

1. 3 1/2 feet = ______________________________
2. 16 feet = ______________________________
3. 5,280 feet = ______________________________
4. 900 feet = ______________________________
5. 2 1/4 feet = ______________________________

E. Change the following miles to kilometers:

(NOTE: 1 mile = 1.609 kilometers)

1. 1/2 mile = ______________________________
2. 5 miles = ______________________________
3. 60 miles = ______________________________
4. 10 miles = ______________________________
5. 4 1/4 miles = ______________________________

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 8--SELECTING METRIC MEASUREMENTS

Directions: Read the following explanation of how to select which metric measurement to use for length when measuring. Then write the measurement (meter, kilometer, centimeter, millimeter) that you would use to show the length for the following items.

1. The meter is used in place of the foot and yard when showing dimensions of larger objects and short distances.
2. The kilometer is used in place of the mile when measuring long distances.
3. The centimeter is used in place of feet and inches when measuring items such as sheet metal and short bars of steel.
4. The millimeter is used in place of the inch when measuring small dimensions or short lengths. It is used in precision measurement.

ITEMS

____________________ A. The length of a swimming pool.

____________________ B. The length of a hammer handle.

____________________ C. The distance to another city.

____________________ D. The thickness of sheet metal.

____________________ E. The width of the room.

____________________ F. The length of a trailer.

____________________ G. The diameter of a small shaft.

____________________ H. The size of a drill bit.

____________________ I. The width of a trailer.

____________________ J. The length of a long pipe.

UNIT VI

SHOP MATH

INFORMATION SHEET 4--ANGLES AND CIRCLES

I. Parts of a circle

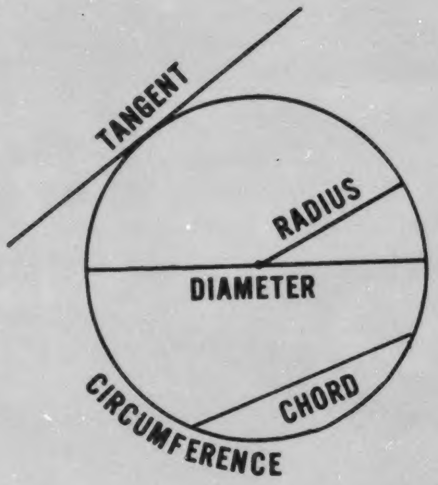
A. Circumference--The length of the curved line that forms a circle.

B. Diameter--A straight line drawn through the center of a circle.

C. Radius--One-half of the diameter.

D. Tangent--A line that touches an arc or the circumference.

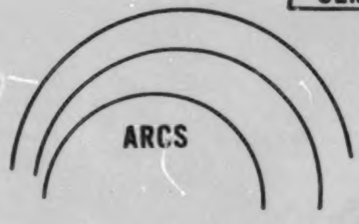
E. Chord--A straight line connecting the two points on the circumference of a circle or the two ends of an arc.


TANGENT
RADIUS
DIAMETER
CHORD
CIRCUMFERENCE

F. Semicircle--A half-circle.

SEMICIRCLE

G. Arc--Any part of the circumference of a circle.



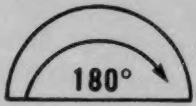
II. Angles

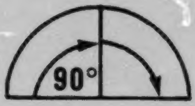
A. A circle has 360 degrees.

(NOTE: A degree is $\frac{1}{360}$ of a circle.)

B. A half-circle would contain 180°. (semicircle)

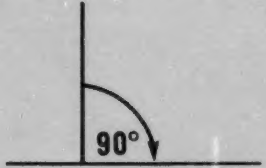
C. One-half of a semicircle contains 90°.





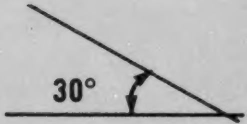
(NOTE: A 90° angle is called a right angle.)

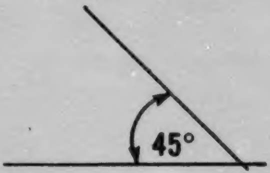
D. Two lines that meet to form a right angle are perpendicular.

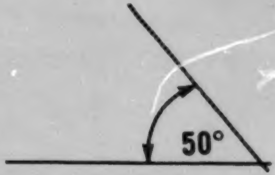


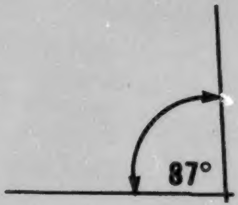
E. When two lines meet to form any angle less than 90°, the angle is called an acute angle.

EXAMPLES:



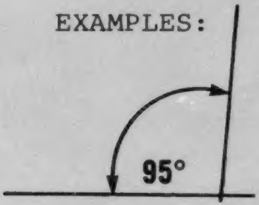


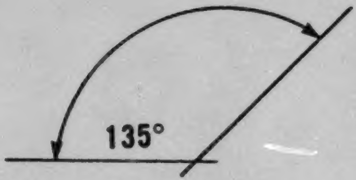


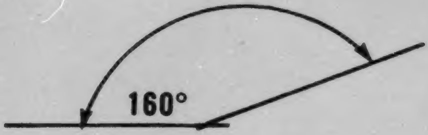


F. When two lines meet to form any angle more than 90°, the angle is called an obtuse angle.

EXAMPLES:

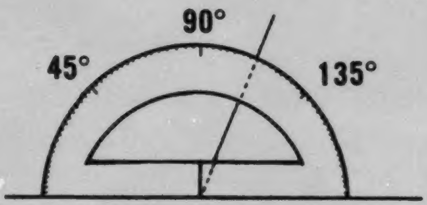






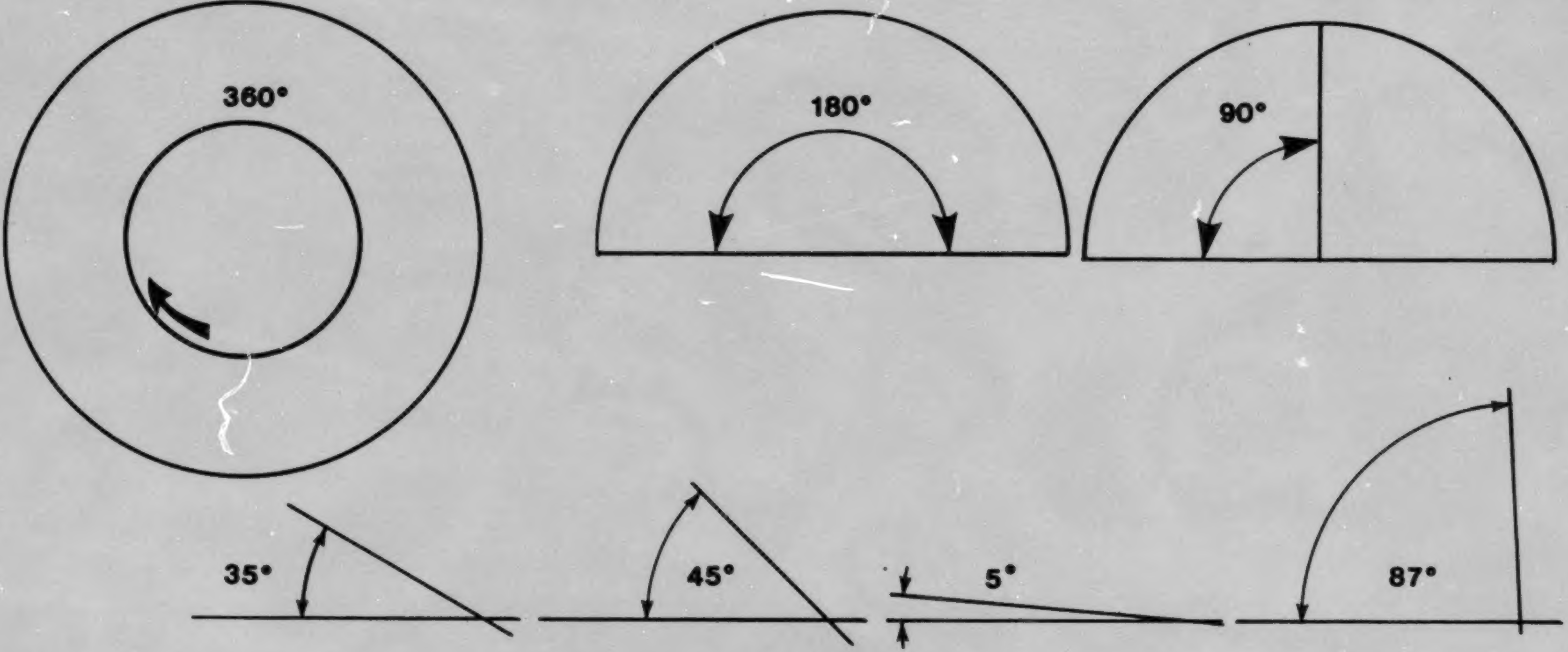
G. Measuring an angle with a protractor.

1. Use one line of the angle for the base.
2. The point where the lines meet should be placed in the center of the protractor.
3. Locate the point where the line crosses the scale on the curve of the protractor.

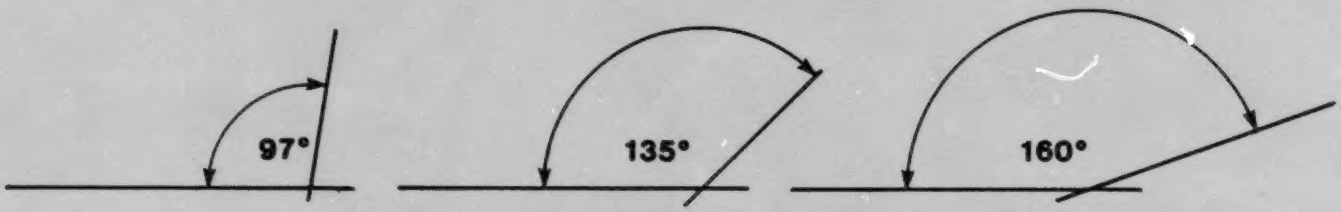


4. Read the number of degrees from 0° point on the side of the base line to the point where the line crosses the curve of the protractor.

H. Divisions of degrees
1. Minutes (60 minutes = 1 degree)
2. Seconds (60 seconds = 1 minute)

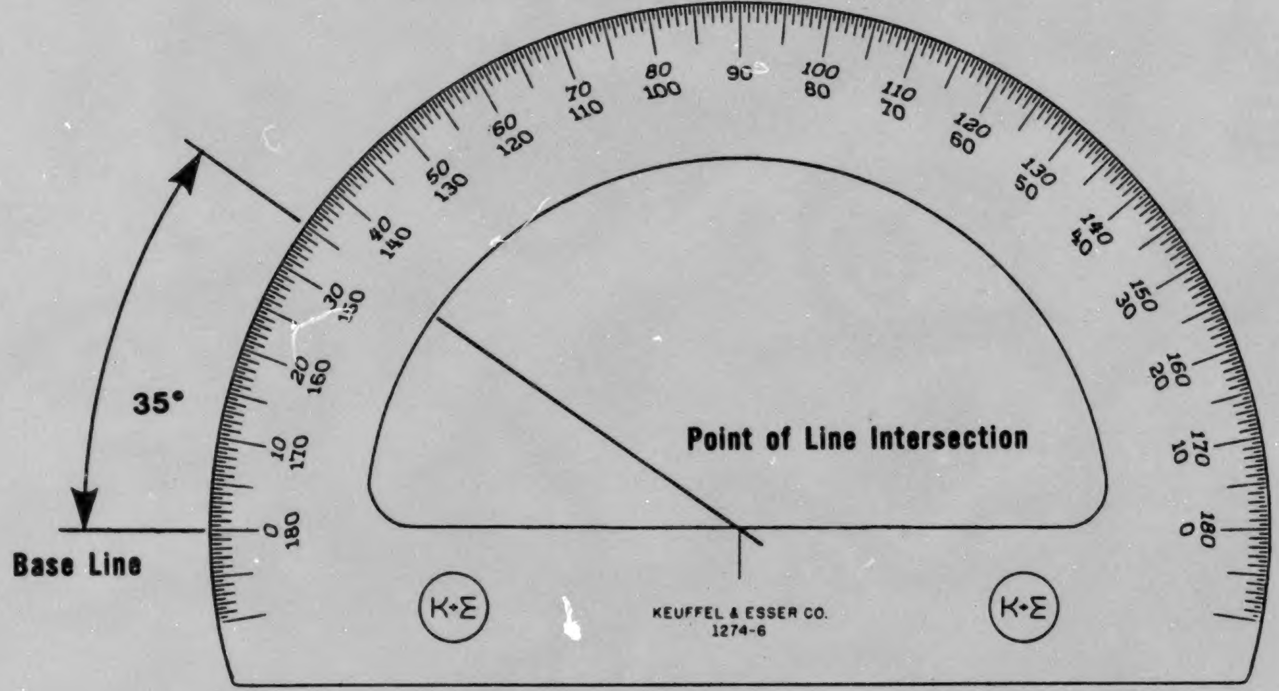

360°
180°
90°
35°
45°
5°
87°

Acute Angles



Obtuse Angles

MEASURING WITH A PROTRACTOR


35°
Base Line
Point of Line Intersection
0
180
10
170
20
160
30
150
40
140
50
130
60
120
70
110
80
100
90
100
80
110
70
120
60
130
50
140
40
150
30
160
20
170
10
180
0
K+E
KEUFFEL & ESSER CO.
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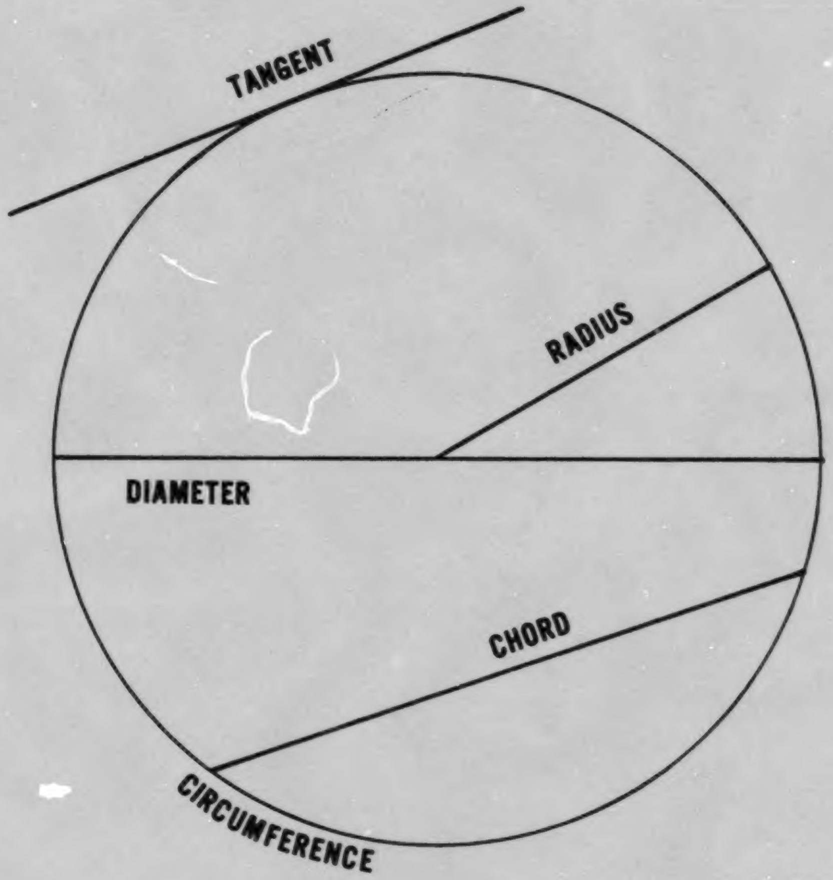
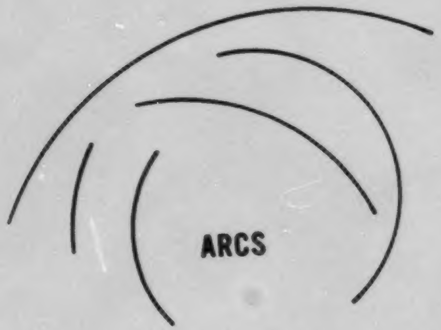
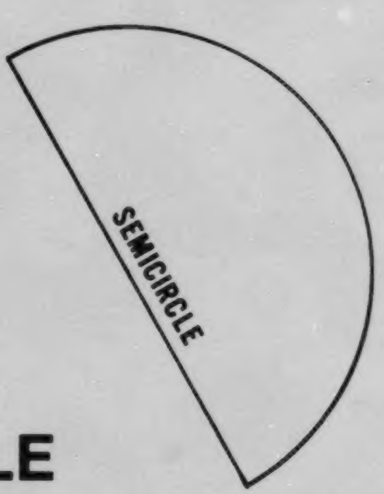
K+E


TANGENT
RADIUS
DIAMETER
CHORD
CIRCUMFERENCE




SEMICIRCLE

PARTS OF A CIRCLE

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 9--CIRCLES

Directions: Answer each of the following questions relating to the use of circles. Use the words below to complete statements.

Semicircle

Chord

Radius

Diameter

Tangent

Circumference

A. Use a compass and a ruler to draw a circle with a diameter of 1-1/2 inches at the right.

B. What is the length of the radius of the circle? ____________________.

C. Draw a line that is tangent to the circle.

D. Draw a line that is one inch long and a chord of the circle above.

E. A line through the center of a circle and touching both sides of the circle is called the ______________________________.

F. A line from the center of the circle to one side is called the ______________________________.

G. The distance around the outside edge of the circle is called the ______________________________.

H. A line that touches two sides of a circle but does not go through the center is called a ______________________________.

I. One-half of a circle is called a ______________________________.

UNIT VI

SHOP MATH

ASSIGNMENT SHEET 10--ANGLES

Directions: You will need a protractor to complete the following questions.

A. Draw the following angles with your protractor.

1. 90°
2. 30°
3. 45°
4. 135°
5. 180°
6. 19°

B. Use the answer list below to complete the questions.

perpendicular
obtuse
acute
20°
50°
90°
360°
180°
145°

1. When two lines intersect to form a right angle, they are ________________________________ to each other.
2. An angle of less then 90° is called an __________________________.
3. An angle of more then 90° is called an __________________________.
4. A right angle contains _______________________ degrees.
5. A circle contains ____________________________ degrees.
6. A semicircle contains ________________________ degrees.

UNIT VI

SHOP MATH

ANSWERS TO ASSIGNMENTS

ASSIGNMENT 1

A. 1. 8, 12, 24, 31, 100.
   2. 12, 25, 36, 63, 172.
   3. 220, 274, 2,007, 14,731, 9,860.

B. 1. .8, .22, 1.01, .821, 1.125.
   2. 9.1, 75.35, 34.4, 31.15.
   3. 22.7, 27.04, 7.505.

ASSIGNMENT 2

A. 1. 2, 6, 12, 73, 74.
   2. 5, 2, 1, 16, 4.
   3. 38, 489, 551, 559, 2,999.

B. 1. .3, .12, .2, .08, .097.
   2. .1, .7, .011, 8.85.
   3. 4.875, 11.75, 2.625, 13,874.

ASSIGNMENT 3

A. 1. 24, 27, 120, 294, 770.
   2. 48, 63, 48, 96, 60.
   3. 300, 600, 142,500, 5,625.

B. 1. .05, .30, .048, 10.35, 51.150.
   2. .625, .42625, .562 1,515.

ASSIGNMENT 4

A. 1. 4, 4, 3, 6, 8.
   2. 8, 25, 20, 20.
   3. 40-1/16, 34-9/11, 29-2/3, 23-43/67.
   4. 1.55, 21.89, 2.59.

B. 1. 1.66, 6, 2.3, .21
   2. .91, .84, 6.

ASSIGNMENT 5

A. 1. 1
2. 1 1/8
3. 1 3/8
4. 6 11/24
5. 9 9/10

B. 1. 3/5
2. 3/8
3. 1/2
4. 9/16
5. 1 15/16

C. 1. 3/8
2. 5/8
3. 24 1/8
4. 2 1/10
5. 8 1/48

D. 1. 7
2. 15
3. 1 1/4
4. 2 1/2
5. 3/16

ASSIGNMENT 6

A. 1. 1000
2. 100
3. 10
4. 10
5. 100
6. 1000

B. meters
C. grams
D. liters
E. 39.37
F. 2.204
G. 1.056

ASSIGNMENT 7

A. 1. 63.5
2. 101.6
3. 1.27
4. 38.1
5. 19.05

B. 1. 15.24
2. 35.56
3. 68.56
4. 99.99
5. 1.27

C. 1. 91.44
2. 320.08
3. 152.40
4. 256.33
5. 38.1

D. 1. 1.066
2. 4.876
3. 1600.244
4. 274.32
5. .685

E. 1. .804
2. 8.045
3. 965.4
4. 16.09
5. 6.838

ASSIGNMENT 8

A. 1

B. 3

C. 2

D. 4

E. 1

F. 1

G. 4

H. 4

I. 3

J. 3

ASSIGNMENT 9

A. Drawing of circle with 1 1/2 inch diameter.

B. 3/4 inch

C. A line tangent to drawing of circle in A.

D. A 1-inch chord in the circle in A.

E. Diameter

F. Radius

G. Circumference

H. Chord

I. Semicircle

ASSIGNMENT 10

A. Evaluated to the satisfaction of the instructor.

B. 1. perpendicular

   2. acute

   3. obtuse

   4. 90°

   5. 360°

   6. 180°

UNIT VI

SHOP MATH

TEST PART 1

1. Match the basic math terms to the correct definition by writing the number of each term in the correct blank on the left.

_____ a. Any natural number that is not broken into parts.

_____ b. A part of a whole number or one.

_____ c. The distance or size from one point to another point.

_____ d. The mark on a measuring tool indicating size or degrees.

_____ e. A semi-precision measuring instrument graduated in fractional or decimal parts of an inch.

_____ f. To find the amount, size, or length of something.

_____ g. A mistake in figuring total measurement.

_____ h. A proper fraction with the bottom number being 10, 100, or 1000.

1. Rule
2. Error
3. Fraction
4. Whole number
5. Decimal
6. Measure
7. Dimension
8. Graduation

2. Identify the three standard lengths of measurement by writing the correct term in the space provided.

inch foot yard

__________ a. A length of measurement containing twelve inches.

__________ b. A length of measurement containing 36 inches or 3 feet.

__________ c. The smallest whole unit of measurement commonly used.

3. Select the proper terms used in working math problems by circling the number of the word that best identifies each statement.

a. Putting two or more numbers together to find a total is:

(1) subtraction

(2) multiplication

(3) addition

b. A fraction with a larger numerator than denominator is a:

(1) subtrahend

(2) improper fraction

(3) multiplier

c. To find out how many of one number there are in another number is:

(1) division

(2) addition

(3) subtraction

d. The answer when adding two or more numbers is the

(1) sum

(2) difference

(3) product

e. A part of a whole number or one is a:

(1) quotient

(2) fraction

(3) denominator

f. The taking of one number from another to obtain a remainder is:

(1) division

(2) multiplication

(3) subtraction

g. The top number of a fraction is a:

(1) denominator

(2) numerator

(3) divisor

h. Adding a number to itself a certain number of times is:

(1) minuend

(2) multiplication

(3) product

UNIT VI

SHOP MATH

TEST PART 2

1. Add or subtract the following fractions:

   a. $\frac{3}{4} + \frac{1}{v} =$

   b. $\frac{1}{2} + \frac{1}{4} =$

   c. $1\frac{1}{3} + 2\frac{1}{2} =$

   d. $3\frac{15}{16} + 8\frac{1}{4} =$

   e. $1\frac{4}{5} + 15\frac{3}{4} =$

   f. $5\frac{3}{4} - 2\frac{1}{4} =$

   g. $6\frac{1}{8} - 3\frac{3}{8} =$

   h. $4\frac{1}{3} - 1\frac{4}{5} =$

   i. $15\frac{1}{8} - 4\frac{3}{16} =$

   j. $69\frac{3}{32} - 48\frac{7}{16} =$

2. Multiply the following fractions.

   a. $\frac{1}{5} \times \frac{1}{5} =$

   b. $\frac{3}{4} \times \frac{1}{4} =$

   c. $3 \times \frac{4}{5} =$

   d. $3\frac{3}{4} \times 5 =$

e. $16 \times 3\frac{1}{8} =$

f. $1\frac{1}{4} \times 3\frac{4}{5} =$

g. $10\frac{5}{8} \times 3\frac{1}{8} =$

h. $5\frac{1}{7} \times 3\frac{2}{5} =$

i. $15 \times \frac{1}{64} =$

j. $1\frac{1}{2} \times 10\frac{1}{8} =$

3. Divide the following fractions:

a. $\frac{5}{8} \div \frac{1}{4} =$

b. $1\frac{4}{5} \div \frac{1}{2} =$

c. $5 \div \frac{3}{16} =$

d. $\frac{1}{4} \div 6 =$

e. $4\frac{1}{2} \div 5\frac{1}{8} =$

UNIT VI

SHOP MATH

TEST PART 3

1. Identify the three base metric measurements by writing the number of each answer in the correct blank on the left.

_____ a. The base measurement for length.

_____ b. The base measurement for weight.

_____ c. The base measurement for volume.

1. gram
2. liter
3. meter

2. Point out the correct metric prefix for multiples or divisions of base measurement by writing the number of the correct answer in the space provided.

_____ a. $\frac{1}{1000}$ or x .001

_____ b. $\frac{1}{100}$ or x .01

_____ c. $\frac{1}{10}$ or x .1

_____ d. x 10

_____ e. x 100

_____ f. x 1000

1. Deka
2. Deci
3. Hecto
4. Kilo
5. Centi
6. Milli

3. Select the correct division or multiple of the meter by circling the correct answers below.

a. A kilometer contains (100, 200, 50) dekometers.

b. A meter contains (10, 100, 500) decimeters.

c. A kilometer contains (10, 20, 100) hectometers.

d. A meter contains (100, 15, 20) centimeters.

e. A centimeter contains (100, 5, 10) millimeters.

f. A kilometer contains (10, 50, 100) meters.

g. A meter contains (10, 100, 1000) millimeters.

4. Convert the following U.S. measurements into metric. Use the conversion charts for each set of problems.

(NOTE: Always multiply the metric equivalent by the U.S. measure.)

	Millimeter	Centimeter	Meter
INCH	25.4	2.5	.0254
FOOT	304.8	30.48	.3048
YARD	914.4	91.44	.9144

U.S. MEASUREMENT METRIC EQUIVALENT

a. 3 inches = centimeters

b. 2.5 inches = millimeters

c. 3 feet = meters

d. 2 feet 4 inches = centimeters

e. 5 yards = millimeters

	GRAMS	KILOGRAM
OUNCE	25.35	
POUND	453.6	.4536

U.S. MEASUREMENT METRIC EQUIVALENT

f. 2 ounces = grams

g. 3.5 ounces = grams

h. 1 pound = kilograms

i. 2 pounds = grams

j. 3 pounds 5 ounces = grams

	LITER	DECILITER	CENTILITER
PINT	.473	4.73	47.32
QUART	.946	9.46	94.6
GALLON	3.78	37.85	378.5

U.S. MEASUREMENT		METRIC EQUIVALENT
k. 2 pints	=	deciliter
l. 2 pints	=	liters
m. 3 quarts	=	deciliter
n. 1 gallon	=	centiliter
o. 2 gallon 1 pint	=	liters

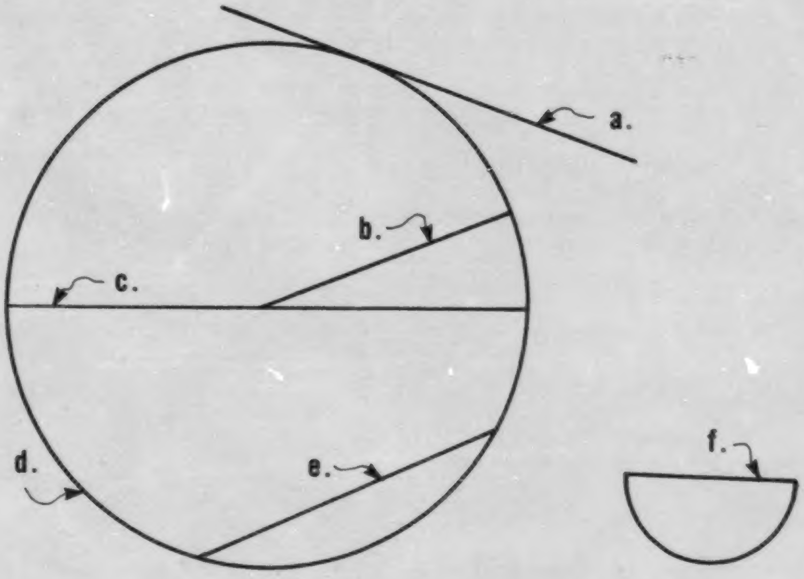
UNIT VI

SHOP MATH

TEST PART 4

1. Identify the parts of a circle by labeling each of the lettered parts below with one of the following terms:

Diameter	Tangent
Arc	Circumference
Radius	Semicircle
Chord	



2. Point out the measurement of angles by circling the number in front of the answer that best completes each statement below.

    a. A circle has

    (1) 180°

    (2) 360°

    (3) 450°

    b. A half of a circle would contain

    (1) 180°

    (2) 360°

    (3) 450°

c. One-half of a semicircle contains

(1) 45°

(2) 90°

(3) 180°

d. Two lines that meet to form a right angle are

(1) parallel

(2) crooked

(3) perpendicular

e. An angle of less than 90° is called

(1) obtuse angle

(2) acute angle

(3) right angle

f. An angle of more than 90° is called a

(1) obtuse angle

(2) acute angle

(3) right angle

UNIT VI

SHOP MATH

ANSWERS TO TEST

PART 1

1. a. 4
   b. 3
   c. 7
   d. 8
   e. 1
   f. 6
   g. 2
   h. 5

2. a. foot
   b. yard
   c. inch

3. a. 3
   b. 2
   c. 1
   d. 1
   e. 2
   f. 3
   g. 2
   h. 2

PART 2

1. a. 1
   b. $\frac{3}{4}$
   c. $3\frac{5}{6}$
   d. $12\frac{3}{16}$
   e. $17\frac{11}{20}$
   f. $3\frac{1}{2}$
   g. $2\frac{3}{4}$
   h. $2\frac{8}{15}$
   i. $10\frac{15}{16}$
   j. $20\frac{21}{32}$

2. a. $\frac{1}{25}$
   b. $\frac{3}{16}$
   c. $2\frac{2}{5}$
   d. $18\frac{3}{4}$
   e. 50
   f. $4\frac{3}{4}$
   g. $33\frac{13}{64}$
   h. $12\frac{12}{35}$
   i. $\frac{15}{64}$
   j. $15\frac{3}{16}$

3. a. $2\frac{1}{2}$
   b. $3\frac{3}{5}$
   c. $26\frac{2}{3}$
   d. $\frac{1}{24}$
   e. $\frac{8}{9}$

PART 3

1. a. 3
   b. 1
   c. 2

2. a. 6
   b. 5
   c. 2
   d. 1
   e. 3
   f. 4

3. a. 100
   b. 10
   c. 10
   d. 100
   e. 10
   f. 1000
   g. 1000

4. a. 7.5
   b. 63.5
   c. 1.2144
   d. 70.96
   e. 4,572
   f. 50.7
   g. 88.725
   h. .4536
   i. 907.2
   j. 1,373.475
   k. 9.46
   l. .946
   m. 28.38
   n. 378.5
   o. 8.033

PART 4

1. a. Tangent
   b. Radius
   c. Diameter
   d. Circumference
   e. Chord
   f. Semicircle
   g. Arcs

2. a. 2
   b. 1
   c. 2
   d. 3
   e. 2
   f. 1

UNIT VII

MEASUREMENT

UNIT OBJECTIVE

After completing this unit, the student will be able to match terms and definitions associated with measurement, identify tools and graduations of tools used in measuring, and read and measure with a rule. This knowledge will be evidenced through demonstration and by satisfactorily completing a unit test.

SPECIFIC OBJECTIVES

After completion of this unit, the student will be able to:

1. Match the terms and definitions associated with measurement.
2. Identify each of the tools used in measuring.
3. Identify the five graduations found on a rule marked in sixteenths.
4. Read a rule graduated in eights of an inch.
5. Read a rule graduated in sixteenths of an inch.
6. Read a rule to a point of measurement.
7. Read the whole numbers of a rule.
8. Read fractions of an inch on a six-foot folding rule.
9. Measure objects using a rule.
10. Draw lines and objects to length using a rule.
11. Reduce measurements to the smallest form.

UNIT VII

MEASUREMENT

SUGGESTED TEACHING ACTIVITIES

I. Objective sheet

A. Discuss unit objective with students.

B. Discuss each specific objective with students.

C. Have the students complete the objectives in the most logical sequence for the class organization.

D. Add any necessary objectives.

II. Information and assignment sheets

A. INFORMATION SHEET--MEASUREMENT

1. Review the terms used in relation to measurement to familiarize the students with the area to be explored. Be sure to point out the terms and their abbreviations.

2. Discuss the types of measuring tools to be used in completing the unit. Explain the relation of inches to feet and to a yard, and the relation of feet to a yard.

3. Explain the graduations which a carpenter's rule will have as markings, and how these can be identified. (Transparencies 3, 4, and 5)

B. ASSIGNMENT SHEETS--Use the following assignment sheets to reinforce the information in this unit.

1. ASSIGNMENT SHEET 1--READING A RULE IN EIGHTHS

Using TM-3--READING WHOLE NUMBERS ON A RULE, and TM-4--READING EIGHTHS ON A RULE, explain which lines on the rule indicate eighths before the students begin the assignment.

2. ASSIGNMENT SHEET 2--READING A RULE IN SIXTEENTHS

Again, use TM-3 as a reference.

3. ASSIGNMENT SHEET 3--READING A RULE TO THE POINT OF MEASUREMENT

Continue using TM-3 as a reference.

4. ASSIGNMENT SHEET 4--READING WHOLE NUMBERS ON A SIX-FOOT FOLDING RULE

Use TM-1 as a reference for this assignment

5. ASSIGNMENT SHEET 5--READING FRACTIONS ON A SIX-FOOT FOLDING RULE

   Refer to TM-1 in completing this assignment.

6. ASSIGNMENT SHEET 6--MEASURING OBJECTS

   (NOTE: Explain the importance of holding the rule straight when measuring.)

7. ASSIGNMENT SHEET 7--DRAWING LINES AND OBJECTS

   (NOTE: If possible, show the students how to begin measuring at the beginning of the second inch, rather than at the end of the ruler, in order to make measurements more nearly accurate.)

8. ASSIGNMENT SHEET 8--REDUCING MEASUREMENTS

   (NOTE: Allow students to look at their rules while figuring the answers, and be sure they have rules that allow enough length to check the measurements called for in the assignment.)

III. Transparency masters

   A. TM-1--TYPES OF RULES

   B. TM-2--TYPES OF SQUARES

   C. TM-3--READING WHOLE NUMBERS ON A RULE

   D. TM-4--READING EIGHTHS ON A RULE

   E. TM-5--READING SIXTEENTHS ON A RULE

IV. Answers to assignments

V. Evaluation

   (NOTE: If the test provided does not contain enough parts to cover the information presented in class, be sure to add questions needed.)

VI. Answers to test

   (NOTE: Be sure to include answers for any parts added to the test.)

VII. References

   A. Books

1. Durban, Walter E. Fundamentals of Carpentry Tools: Materials and Practices, Volume 1. Chicago: American Technical Society, 1967.

2. Educational Department. Stanley Tool Guide. New Britain: Division of the Stanley Works.

3. McDonald, Leo P. The Use of Hand Woodworking Tools. Albany: Delmar Publishers, Inc., 1962.

4. Wagner, Willis H. Modern Carpentry. Homewood, Illinois: Goodheart-Wilcox Company, Inc., 1976.

B. Audiovisuals

Measurement, Measure With A Rule: Small Engine Repair Series. Commerce, Texas: Occupational Curriculum Laboratory, East Texas State University, 1983.

UNIT VII

MEASUREMENT

INFORMATION SHEET

I. Terms and definitions

  A. Whole number--Any natural number that is not broken into parts

  EXAMPLE: 1, 2, 3, 4, . . . 11, 12, 13, 14, and others

  B. Fraction--A part of a whole number or one

  EXAMPLE: 1/16, 1/8, 1/4, 1/2

  C. Dimension--The distance or size from one point to another point

  D. Graduation--The mark on a measuring tool indicating size or degrees

II. Types of measuring tools

  A. Rules

    1. Folding wood rule

    2. Steel tape

    3. Yardstick

    4. 24-inch rule

    5. 12-inch rule

  B. Squares

    1. Framing square

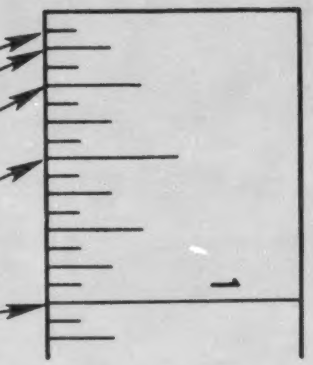
    2. Combination square

    3. Try square

III. Carpenter's rules

A. Graduations

1. Sixteenths
2. Eighths
3. Fourths
4. Halves
5. Inches



B. All rules read alike.

(NOTE: Some have been divided into smaller graduations per inch than others.)

C. Carpenters' rules have also been graduated into feet.

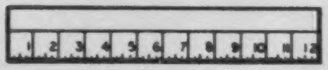
(NOTE: There is also a mark on every 16-inch center.)

TYPES OF RULES

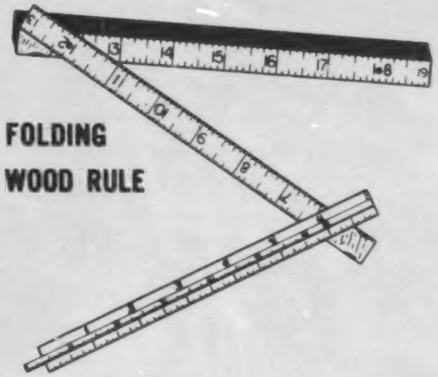
ABBREVIATIONS

1 inch = 1 in. or 1"
1 foot = 1 ft.
1 yard = 1 yd.

12 inches = 1 foot

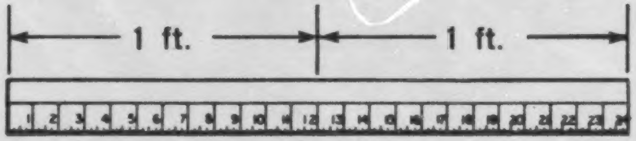

1
2
3
4
5
6
7
8
9
10
11
12

12" RULE

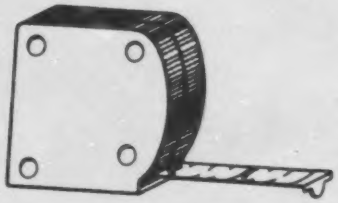

13
14
15
16
17
18
19

FOLDING WOOD RULE

24 inches = 2 feet

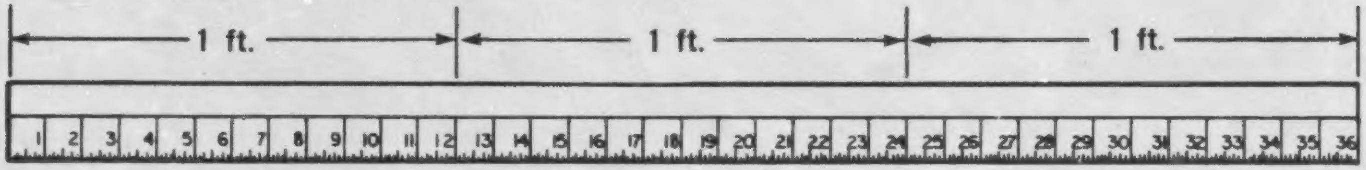

1 ft.
1 ft.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

24" RULE



STEEL TAPE

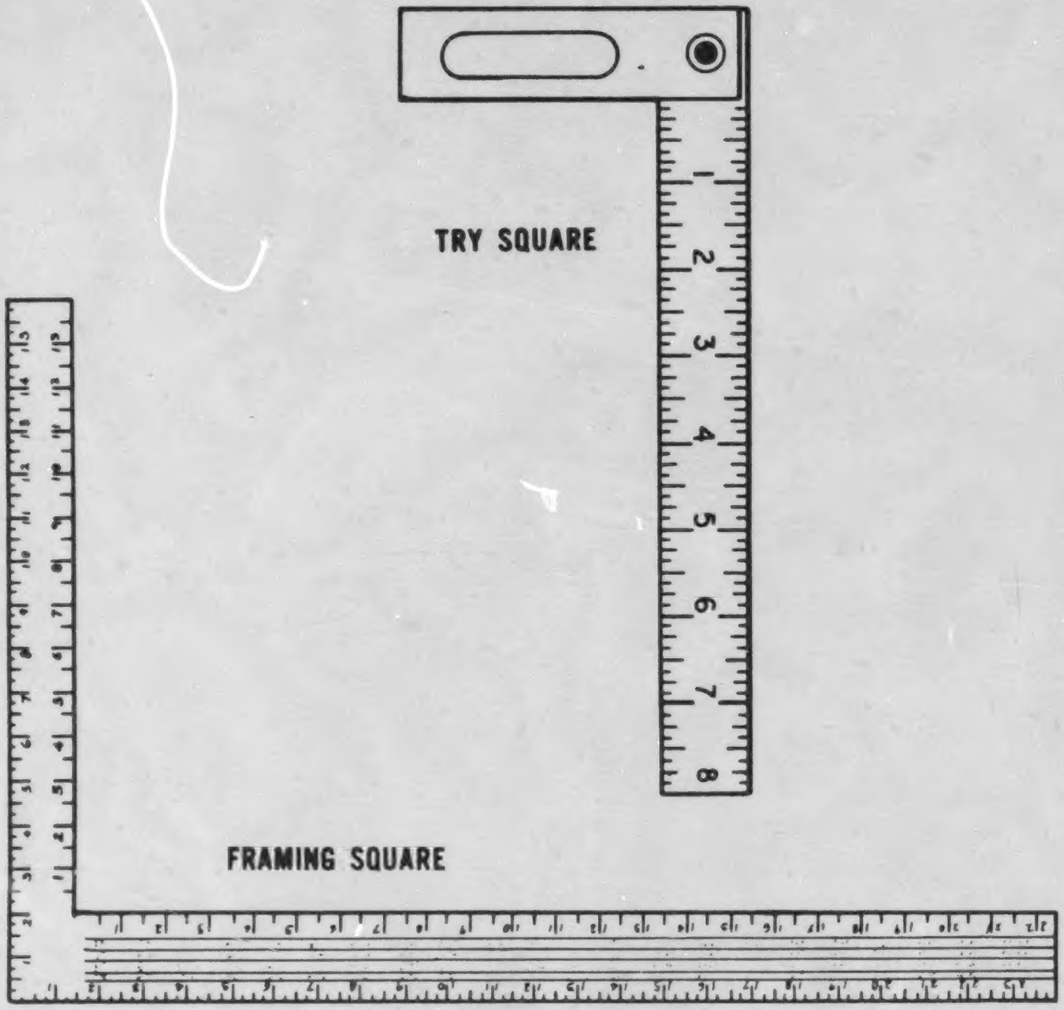
36 inches = 3 feet = 1 yard

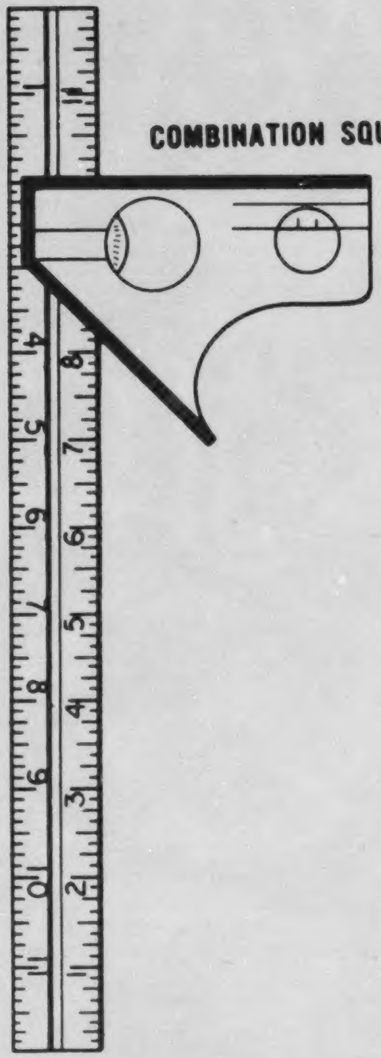

1 ft.
1 ft.
1 ft.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36

YARDSTICK

TM-1

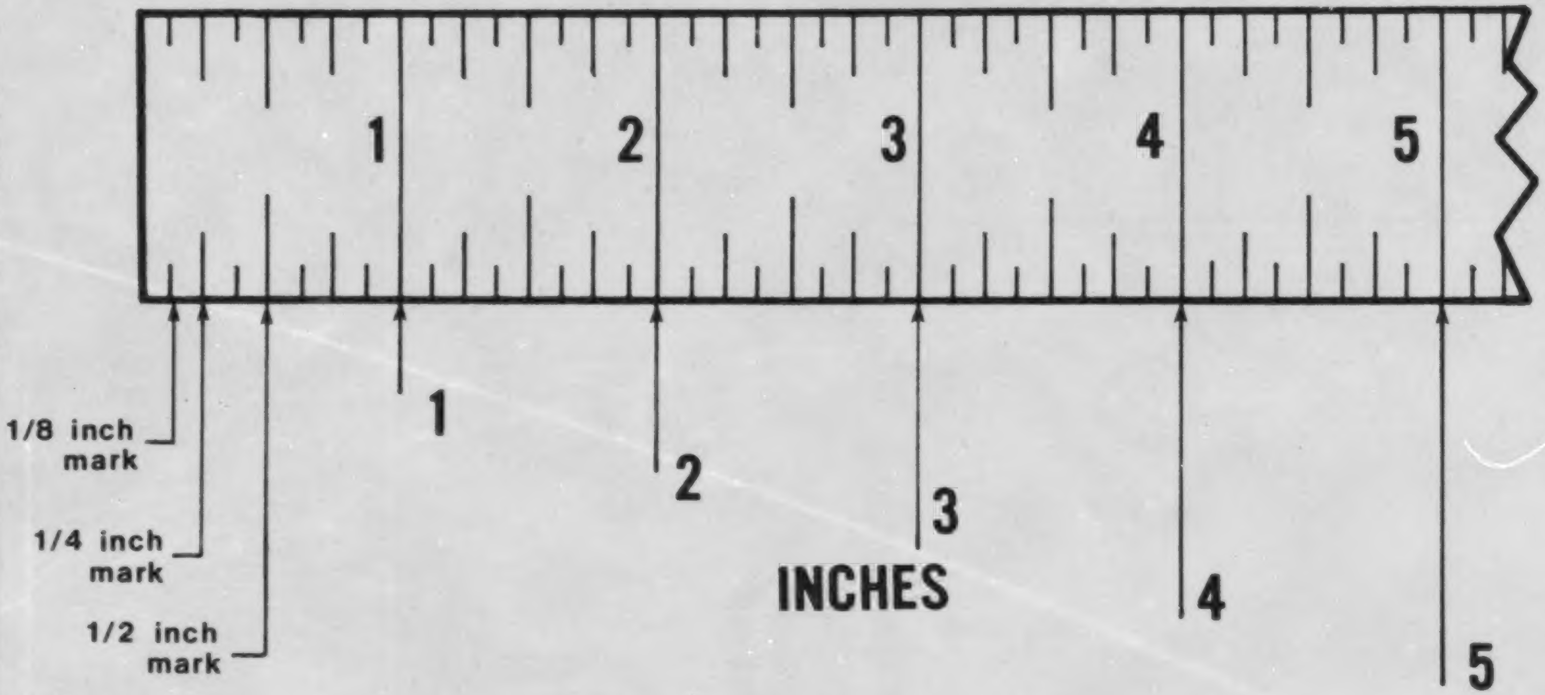
TYPES OF SQUARES


TRY SQUARE

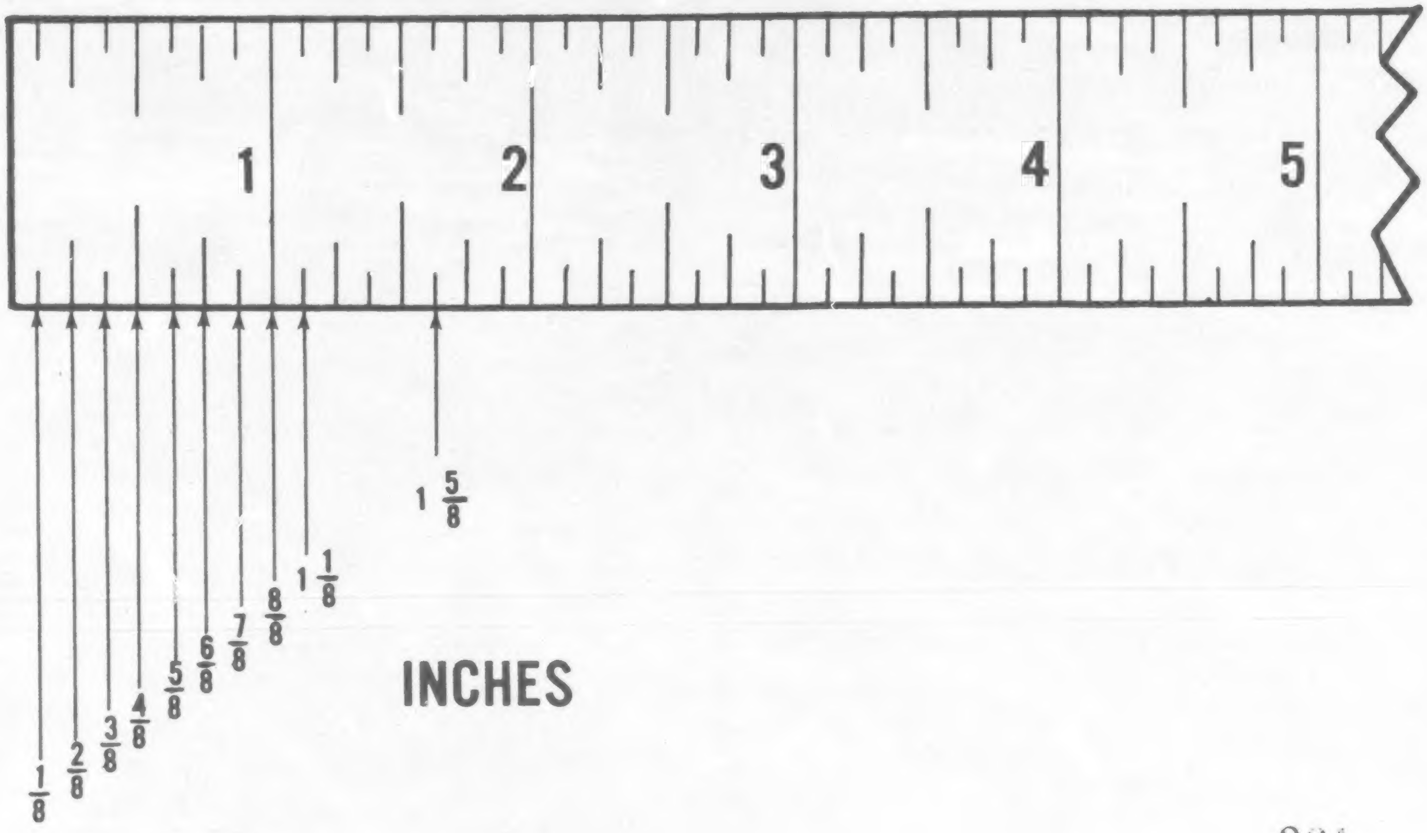

COMBINATION SQUARE

FRAMING SQUARE

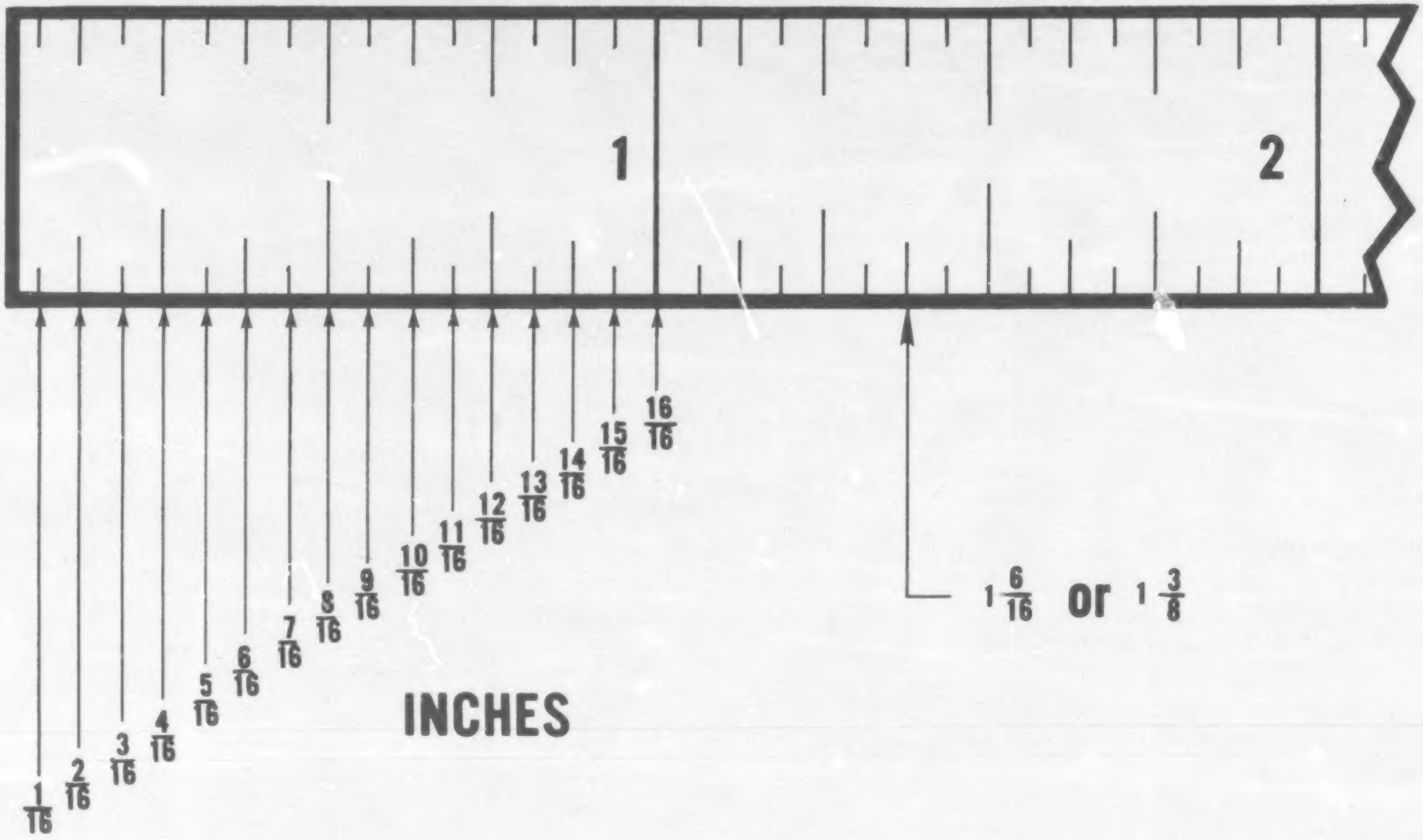
READING A RULE


1
2
3
4
5
1/8 inch mark
1/4 inch mark
1/2 inch mark
1
2
3
4
5
INCHES

READING EIGHTHS ON A RULE


1
2
3
4
5
1/8
2/8
3/8
4/8
5/8
6/8
7/8
8/8
1 1/8
1 5/8
INCHES

READING SIXTEENTHS ON A RULE


1
2
1/16
2/16
3/16
4/16
5/16
6/16
7/16
8/16
9/16
10/16
11/16
12/16
13/16
14/16
15/16
16/16
1 6/16 or 1 3/8
INCHES

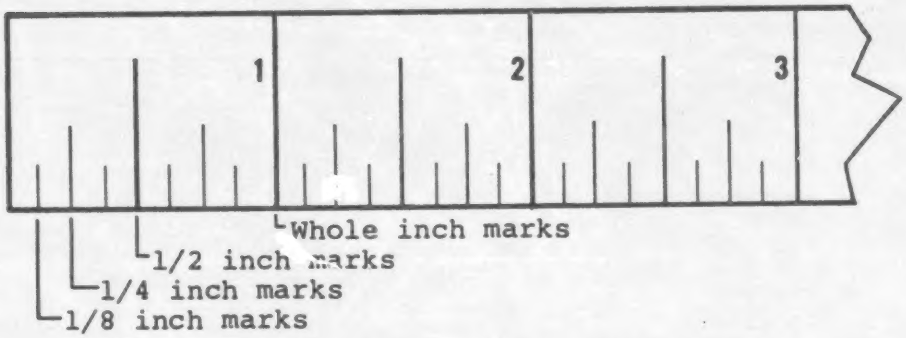
UNIT VII

MEASUREMENT

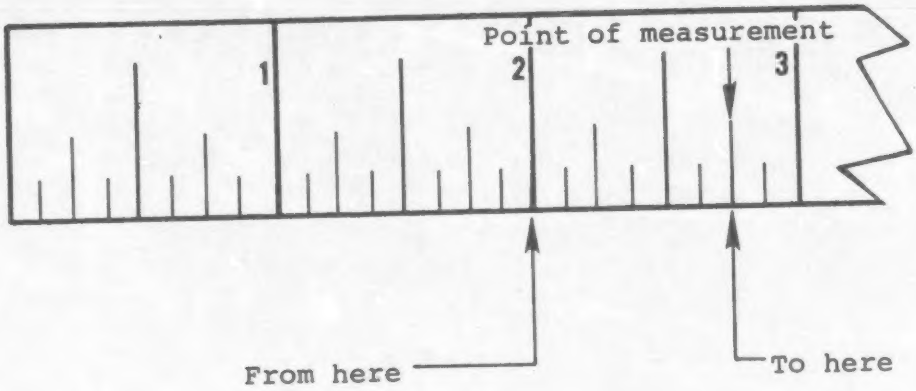
ASSIGNMENT SHEET 1--READING A RULE IN EIGHTHS

Directions: Follow the steps below to fill in the graduations of the rule on the back page.

1. Determine the size of each graduation by the length of the mark.

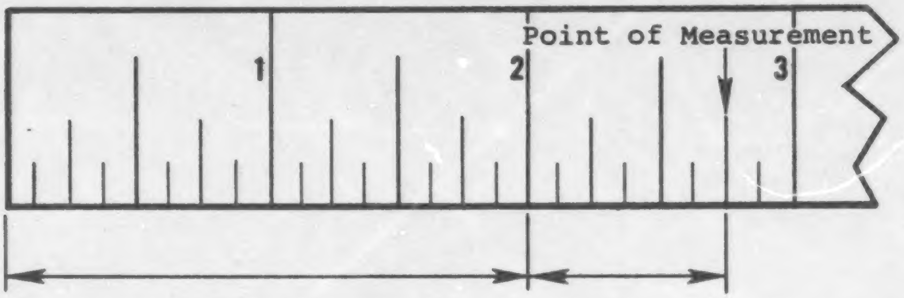

1
2
3
Whole inch marks
1/2 inch marks
1/4 inch marks
1/8 inch marks

2. Count the number of divisions from the last inch mark to the point of measurement.


Point of measurement
1
2
3
From here
To here

3. Add this fraction to the whole number of inches behind the point of measurement.

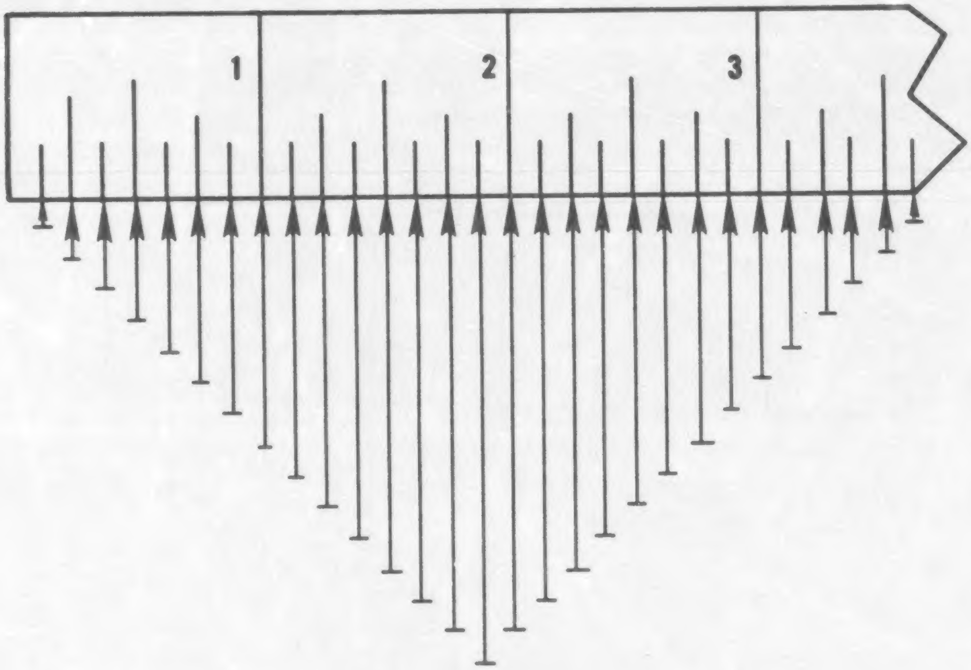
(NOTE: If there are no whole numbers behind the point of measurement, the total will be the fraction of an inch.)


Point of Measurement
1
2
3

2" + 6/8" = 2 6/8"

4. Reduce if possible:

2 6/8" = 2 3/4"

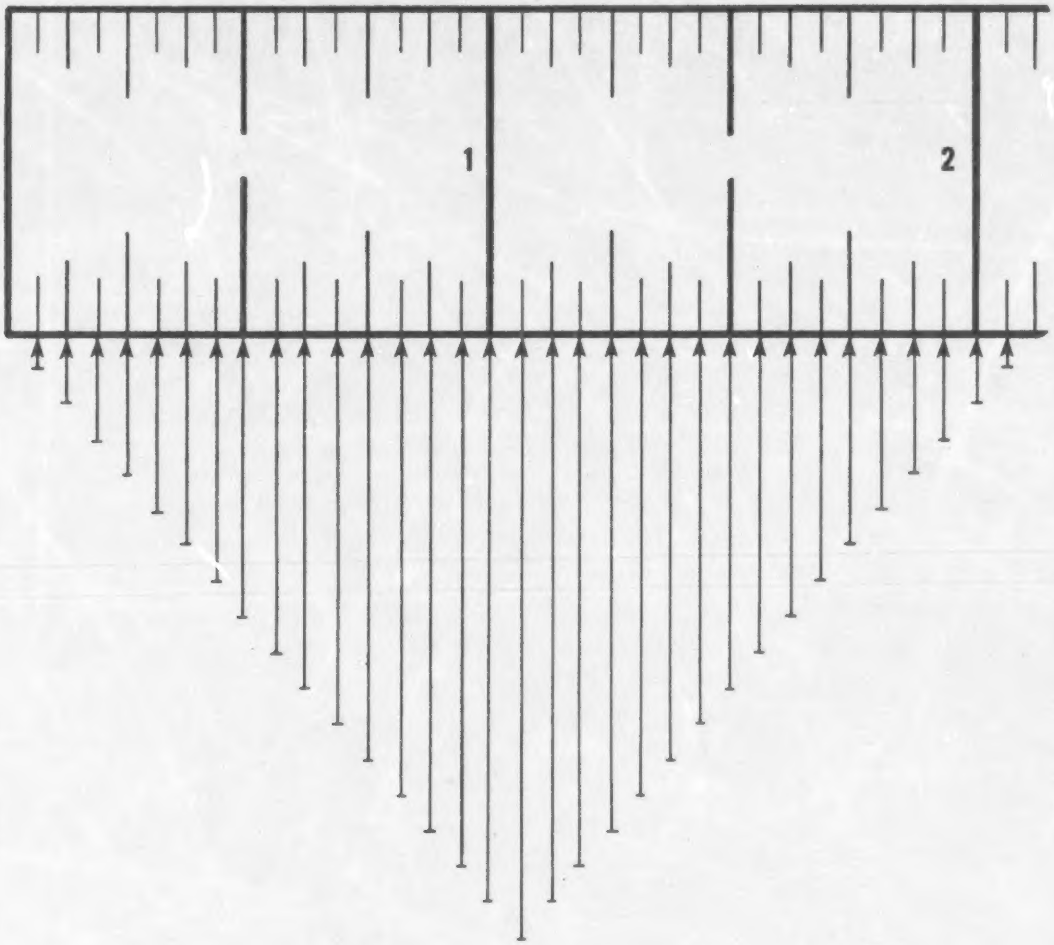


UNIT VII

MEASUREMENT

ASSIGNMENT SHEET 2--READING A RULE IN SIXTEENTHS

Directions: Fill out the graduations on the rule using the same steps as on Assignment Sheet #1.

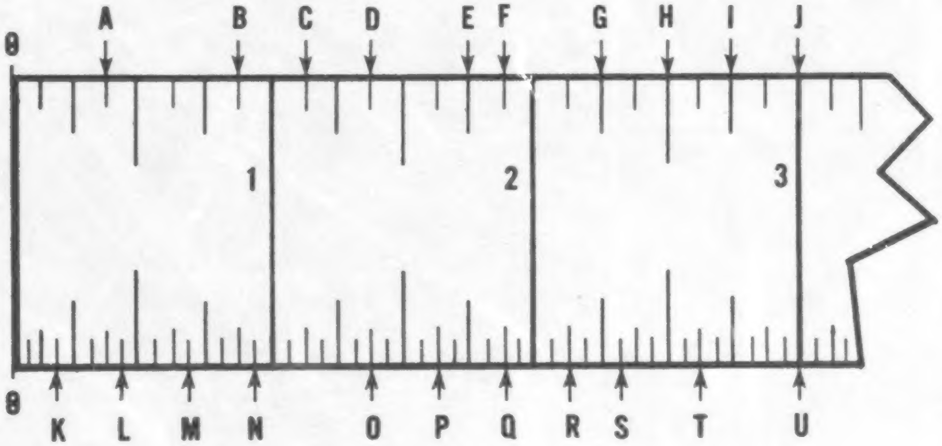


UNIT VII

MEASUREMENT

ASSIGNMENT SHEET 3--READING A RULE TO THE POINT OF MEASUREMENT

Directions: Use the drawing below to determine the distances from the left end of the rule, which is the "0" point, to the point of measurement, which will be lettered.



Fill in each of the distances below. Reduce the answer if possible. (NOTE: 0 is the zero point.)

1. 0 to A ______
2. 0 to B ______
3. 0 to C ______
4. 0 to D ______
5. 0 to E ______
6. 0 to F ______
7. 0 to G ______
8. 0 to H ______
9. 0 to I ______
10. 0 to J ______
11. 0 to K ______
12. 0 to L ______
13. 0 to M ______
14. 0 to N ______
15. 0 to O ______
16. 0 to P ______
17. 0 to Q ______
18. 0 to R ______
19. 0 to S ______
20. 0 to T ______
21. 0 to U ______

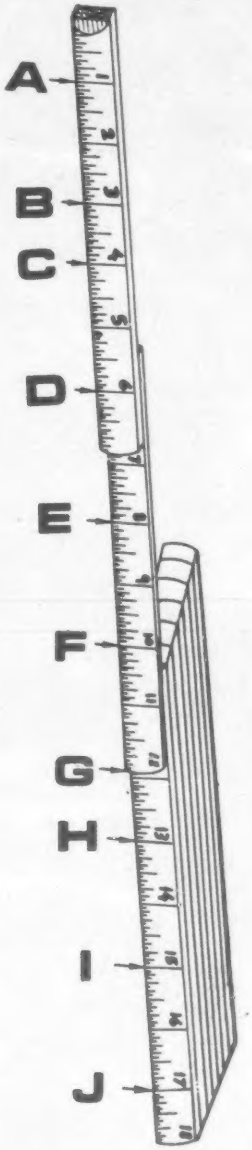
UNIT VII

MEASUREMENT

ASSIGNMENT SHEET 4--READING WHOLE NUMBERS ON A SIX-FOOT FOLDING RULE

Directions: Write the measurement in inches for each of the letters on the drawing. Change measurements over 12 inches into feet and inches.

1. A = ____________
2. B = ____________
3. C = ____________
4. D = ____________
5. E = ____________
6. F = ____________
7. G = ____________
8. H = ____________
9. I = ____________
10. J = ____________



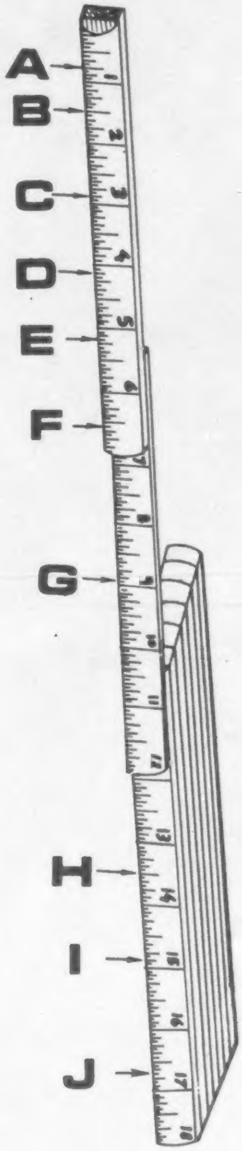
UNIT VII

MEASUREMENT

ASSIGNMENT SHEET 5--READING FRACTIONS ON A SIX-FOOT FOLDING RULE

Directions: Write the measurements for each of the letters on the drawing. Reduce each to the smallest fraction.

1. A = ____________
2. B = ____________
3. C = ____________
4. D = ____________
5. E = ____________
6. F = ____________
7. G = ____________
8. H = ____________
9. I = ____________
10. J = ____________


A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

UNIT VII

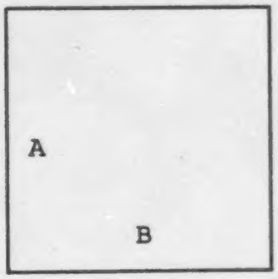
MEASUREMENT

ASSIGNMENT SHEET 6--MEASURING OBJECTS

Directions: Use a ruler to find the lengths shown on the following drawings.

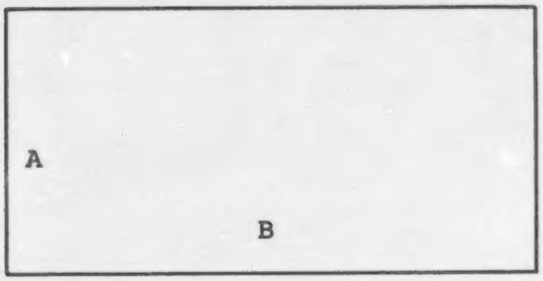
1. a.

   b.



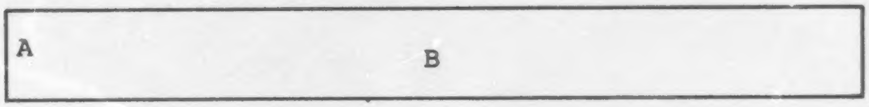
2. a.

   b.



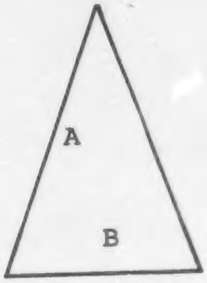
3. a.

   b.



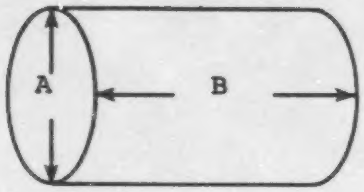
4. a.

   b.



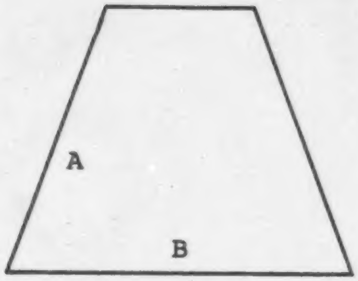
5. a.

b.



6. a.

b.



UNIT VII

MEASUREMENT

ASSIGNMENT SHEET 7--DRAWING LINES AND OBJECTS

Directions: Using a ruler, draw the following according to the lengths given.

1. Lines
   a. 1 1/2"
   b. 2 1/4"
   c. 3 1/8"
   d. 3 3/16"
   e. 4 15/16"
2. Squares
   a. 2" x 2"

   b. 1 3/8" x 1 3/8"

3. Triangles

a. 1 3/4" x 1 3/4" x 2"

b. 1 7/8" x 1" x 1 7/8"

MEASUREMENT

ASSIGNMENT SHEET 8--REDUCING MEASUREMENTS

Directions: Reduce each of the following lengths to their smallest form. Use feet and inches for each. Use the back for any figuring.

1. 13 inches = _____ feet _____ inches
2. 15 inches = _____ feet _____ inches
3. 9 inches = _____ feet _____ inches
4. 25 inches = _____ feet _____ inches
5. 16 3/4 inches = _____ feet _____ inches
6. 19 7/8 inches = _____ feet _____ inches
7. 21 15/16 inches = _____ feet _____ inches
8. 5 4/8 inches = _____ feet _____ inches
9. 26 6/8 inches = _____ feet _____ inches
10. 11 14/16 inches = _____ feet _____ inches
11. 30 15/16 inches = _____ feet _____ inches
12. 34 2/8 inches = _____ feet _____ inches
13. 8 16/8 inches = _____ feet _____ inches
14. 21 11/4 inches = _____ feet _____ inches
15. 48 17/16 inches = _____ feet _____ inches
16. 72 inches = _____ feet _____ inches
17. 96 inches = _____ feet _____ inches
18. 120 inches = _____ feet _____ inches
19. 168 inches = _____ feet _____ inches
20. 1 yard 19 21/16 inches = _____ feet _____ inches

UNIT VII

MEASUREMENT

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet 1

The ruler should be labeled 1/8" through 3 1/2" by eighths.

Assignment Sheet 2

The ruler should be labeled 1/16" through 2 1/4" by sixteenths.

Assignment Sheet 3

1. 3/8"
2. 7/8"
3. 1 1/8"
4. 1 3/8"
5. 1 6/8" or 1 3/4"
6. 1 7/8"
7. 2 2/8" or 2 1/4"
8. 2 4/8" or 2 1/2"
9. 2 6/8" or 2 3/4"
10. 3"
11. 3/16"
12. 7/16"
13. 11/16"
14. 15/16"
15. 1 6/16" or 1 3/8"
16. 1 10/16" or 1 5/8"
17. 1 14/16" or 1 7/8"
18. 2 2/16" or 2 1/8"
19. 2 5/16"
20. 2 10/16" or 2 5/8"
21. 3'

Assignment Sheet 4

1. 1
2. 3
3. 4
4. 6
5. 8
6. 10
7. 12
8. 13 = 1'1"
9. 15 = 1'3"
10. 17 = 1'5"

Assignment Sheet 5

1. 3/4"
2. 1 1/2"
3. 2 7/8"
4. 4 1/8"
5. 5 3/16"
6. 6 9/16"
7. 8 15/16"
8. 1' 1 1/2"
9. 1' 2 7/8"
10. 1' 4 11/16"

Assignment Sheet 6

1. a. 1 1/2"
   b. 1 1/2"
2. a. 1 1/2"
   b. 3"
3. a. 1/2"
   b. 4 7/8"
4. a. 1 5/8"
   b. 1 1/8"
5. a. 1"
   b. 1 1/2"
6. a. 1 5/8"
   b. 2"

Assignment Sheet 7

Evaluated to the satisfaction of the instructor.

Assignment Sheet 8

1. 1 foot 1 inch
2. 1 foot 3 inches
3. 9 inches
4. 2 feet 1 inch
5. 1 foot 4 3/4 inches
6. 1 foot 7 7/8 inches
7. 1 foot 9 15/16 inches
8. 5 1/2 inches
9. 2 feet 2 3/4 inches
10. 11 7/8 inches
11. 2 feet 6 15/16 inches
12. 2 feet 10 1/4 inches
13. 10 inches
14. 1 foot 11 3/4 inches
15. 4 feet 1 1/16 inches
16. 6 feet
17. 8 feet
18. 10 feet
19. 14 feet
20. 4 feet 8 5/16 inches

UNIT VII

MEASUREMENT

TEST

1. Match the terms on the right to the correct definition by placing the numbers in the spaces provided.

_____ a. Any natural number that is not broken into parts

_____ b. A part of a whole number or one

_____ c. The distance or size from one point to another point

_____ d. The marks on a measuring tool indicating size or degrees

1. Dimension
2. Fraction
3. Graduation
4. Whole number

2. Identify each of the measuring tools by selecting its correct name from the list below and writing it in the blank provided.

Folding wood rule

Steel tape

Yardstick

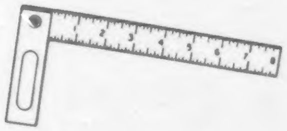
24-inch rule

12-inch rule

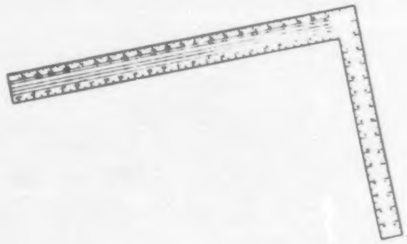
Framing square

Combination square

Try square



a. ______________________



b. ______________________

Folding wood rule

Steel tape

Yardstick

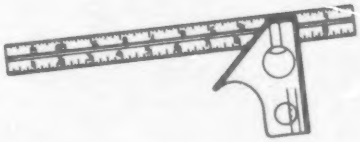
24-inch rule

12-inch rule

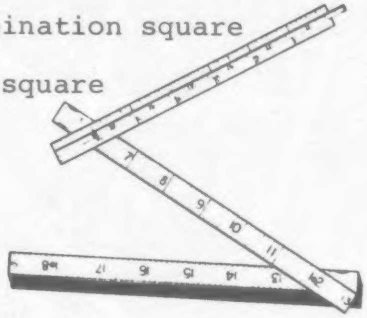
Framing square

Combination square

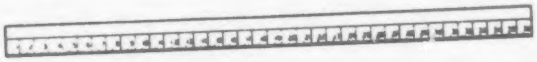
Try square



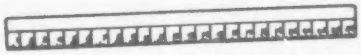
c. ______________________________



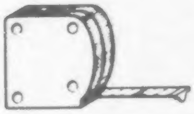
d. ______________________________



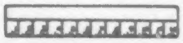
e. ______________________________



f. ______________________________



g. ______________________________



h. ______________________________

3. Identify the five graduations found on a sixteenths rule.

a.

b.

c.

d.

e.

UNIT VII

MEASUREMENT

ANSWERS TO TEST

1. a. 4
   b. 2
   c. 1
   d. 3
2. a. Try square
   b. Framing square
   c. Combination square
   d. Folding wood rule
   e. Yardstick
   f. 24-inch rule
   g. Steel tape
   h. 12-inch rule
3. a. Sixteenths
   b. Eighths
   c. Fourths
   d. Halves
   e. Inches